

## Inside Dope

By GEORGE  
F. TAUBENECK



Learn to live and laugh —  
thus delay your epitaph

### Story of the Week

**Ike Looks Great**  
**Good Try, Good Future**  
**Hooray for the**  
**Non-Conformists**  
**What Really Happened?**  
**Motley Is a Helluva Guy**  
**'I Didn't Get a Chance**  
**To Talk'**  
**What Does a College**  
**President Do?**  
**Out of Our Mailbag**  
**Industry Ethics**  
**Modifications Suggested**  
**George Jones Cuts the**  
**Gordian Knot**

### Story of the Week

To President Eisenhower's Conference on Technical and Distribution Research for the Benefit of Small Business (reported extensively in last week's issue and on pages 38-41 of this) one of our subscribers introduced himself.

"I'm Mort Farr, appliance dealer from Upper Darby, Pa. That's near Philadelphia. I lick the Philadelphia discounters from here to Christmas by advertising: 'Not the Lowest Prices, But Farr Better Service.'"

"We have a local radio station which ran a quiz contest. First prize was a week in Philadelphia with all expenses paid. Second prize was an all-expense trip to Philadelphia for two weeks."

### Ike Looks Great

Although quite a body of information highly useful to NEWS subscribers grew out of the President's Conference, everybody asks us first:

"How is Ike? How does he look? How is he holding up under all this strain?"

Be reassured, friends. His complexion is ruddy; he steps jauntily. Apparently Ike has overcome his heart attack and ileitis operation. Neither foreign complications nor Arkansas have got him down. His celebrated personal charm and crackling grin come through much better in person than they do on television, incidentally.

Despite his age—and all he has been through, seen, and done—he still looks and acts like an honest, amiable, sincere small-town lad.

How history will score him as a President remains to be seen. But it would seem incredible for anyone to doubt that he is a man of "goodwill for all, with malice toward none."

The President of the United States told a cute small-business story, too. While in New York City, Cabinet Member Mitchell went from here to there in a  
(Continued on Page 12, Col. 1)

## 252 Set for Biggest ARI Show

WASHINGTON, D. C. — Almost 94,000 sq. ft. of exhibit space has been assigned for displays at the 10th Exposition of the Air-Conditioning and Refrigeration Industry, Show Director George E. Mills announced recently.

The exposition will be staged in Chicago's International Amphitheatre Nov. 18-21 at the same time that several refrigeration and air conditioning associations will hold their national conventions in the city.

Space sold so far is more than 9,000 sq. ft. above the total space taken at the 9th Exposition at Atlantic City in November, 1955.

A number of desirable locations is still available, Mills said. These openings result from late changes in space requirements by some exhibitors and other shiftings of booths to gain locations near exhibitors in allied lines.

Latest list released by ARI shows 252 exhibitors signed up for space.

(Concluded on Page 4, Col. 3)

## Sees Drive To Sell Cooling Benefits In '58

WASHINGTON, D. C. — A joint industry promotion to get the public to spend more of its dollars for air conditioning, is likely to be undertaken by the room air conditioner industry next year.

So states Geo. S. Jones, Jr., managing director, Air-Conditioning & Refrigeration Institute, reporting that the ARI Room Air Conditioner Section at a recent meeting had given much time to possible approaches to the matter of selling the general benefits of air conditioning to the public.

A principal tool in the joint promotion efforts may be the long-discussed, but never-produced, movie film on air conditioning, which would be made available for public gatherings and TV showings. A special  
(Concluded on Page 4, Col. 5)

### Hotel Reservations

CHICAGO — Those who are planning to attend the 10th Exposition of the Air Conditioning and Refrigeration Industry, Nov. 18-21 here, and who haven't made hotel reservations, are urged to do so at once.

Those who haven't made reservations through an association with whom they may be affiliated, may get some assistance by writing the Housing Bureau, 10th Exposition of the Air Conditioning and Refrigeration Industry, 134 N. LaSalle  
(Concluded on Page 4, Col. 5)

### Five Plead Guilty To Detroit Refrigeration License Violations

DETROIT — Out of 19 firms or individuals hailed into traffic court here Oct. 3 for installing air conditioning equipment without a refrigeration contractor's license, five pleaded guilty and paid \$25 court costs. Seven had their cases dismissed without prejudice after producing evidence that the actual installation was made by a licensed contractor.

Seven had their cases adjourned for a week or two weeks, giving them an opportunity to get their cases straightened out.  
(Concluded on Page 45, Col. 3)

### Predicts 4% Rise In Conditioning Sales

LOS ANGELES — A conservative 4% increase in air conditioning retail dollar volume for 1958—to nearly \$3.4 billion—was predicted here recently by Cloud Wampler, chairman of the board of Carrier Corp.

By 1962, however, he forecasts that dollar volume for the industry would exceed \$5 billion.

The 1962 prediction doubles the \$2.5 billion sales the industry accomplished in 1954.

"I have not been able to find

many economists or industrial executives who really think the general business level will change much next year. And I do not either," Wampler said.

Here are Wampler's industry-wide dollar volume estimates for all of 1957, and his forecasts for 1958:

Room air conditioners, \$426 million for the year 1957, \$438 million for 1958.

Self-contained equipment,  
(Concluded on Back Page, Col. 1)

## BEHIND PAGE ONE . . .

Room Air Conditioner News.....	17
Avoiding Service Work Pitfalls	
Service Contract Protects Dealer, While	
Coupons Offer Customer Possibility of Rebate....	18
Refrigerated Trailer Ratings	
Road Test Results Closely Parallel	
Ratings In Laboratory Findings.....	29
West Coast Cooling Design Conditions	
Northwest Has Low Wet Bulb Conditions;	
Larger Evaporator Needed In California.....	34
Help for Small Business	
Small Business Conference Report Section	
Shows How Government, Big Business Are	
Aiding Small Business In Management, Research	38-41
Refrigeration Problems	
Across-the-Line Electrical Diagram (1).....	42
Servicing Auto Air Conditioners.....	44
Desiccants and Driers (4).....	46
Regular Features	
Editorial.....	22
Patents.....	47
What's New.....	26
Gov't Contracts.....	46

## More Groups Plan Conventions

### ARW

COLUMBUS, Ohio — Entire convention of the Air-Conditioning & Refrigeration Wholesalers will be crammed into 24 hours, the program issued by ARW headquarters here, reveals.

The annual convention will get under way at noon Sunday, Nov. 17 and will close promptly at noon, Monday, Nov. 18. Entire affair will be staged in the Cotillion Room of the Morrison hotel, Chicago.

Manufacturer's relation committee and finance committee are scheduled to meet on Thursday.  
(Concluded on Page 4, Col. 1)

### RACCA

CLEVELAND — Through two open forum panel sessions and two luncheon speakers, members of the Refrigeration & Air Conditioning Contractors Association will get advice on "How to Make Money" at the association's 12th annual convention staged to coincide with the 10th Exposition of the Air Conditioning and Refrigeration Industry.

The convention will be held from Sunday, Nov. 17 through Tuesday, Nov. 19 in the Gold Coast Room of the Drake hotel in Chicago.

Both panel sessions and talks  
(Concluded on Page 45, Col. 1)

### RSES

CHICAGO — When the Refrigeration Service Engineers Society gathers for its 20th annual convention at the Morrison hotel here Nov. 16-19, it will be for the first time in many years without the familiar figure of the late Paul Reed on the speakers' platform.

Stepping into Reed's favorite role of moderating the popular "Information Please" sessions will be John H. Spence, chairman of the RSES educational and examining board. Spence is directing the entire educational program.

(Concluded on Page 45, Col. 1)

## Gas Utilities To Buy Arkla Cooling Units

### 50 To Take 'Minimum' Of 4,600 Units In '58

ST. LOUIS — Some 50 gas companies have pledged to purchase a minimum of 4,600 "Arkla-Servel" gas air conditioners within the next year at a price reduced 20% below last year's price.

That agreement was announced at the annual convention of the American Gas Association here recently by J. C. Hamilton, president of the Arkla Air Conditioning Corp.

Other gas companies will be able to purchase a minimum of 25 units on similar terms if application is made to Arkla before Dec. 1, Hamilton said.

He announced this program as part of a detailed report on his company's plans for operating and developing the air conditioning plant, properties, and business of Servel which Arkla acquired last month.

"The best estimates that we  
(Concluded on Page 20, Col. 1)

## Arkla, AGA Map '58 Gas Cooling Drive

NEW YORK CITY — A campaign to revitalize the market for gas air conditioning in 1958 has been mapped by the gas industry, in cooperation with Arkla Air Conditioning Corp., the American Gas Association disclosed.

Arkla is a subsidiary of Arkansas-Louisiana Gas Co., which on Sept. 20 completed purchase of the Servel, Inc. air conditioning division.

Following a meeting with J. C. Hamilton, president of Arkla, the AGA's Air Conditioning Promotion Committee has constituted itself a task force to mobilize the support of the nation.  
(Concluded on Back Page, Col. 2)

## Ace Cabinet Ups E. I. Stern to Pres.

NEW BEDFORD, Mass. — Appointment of Edward I. Stern to be president of Ace Cabinet Corp. has been announced.

This appointment "reflects the dynamic new program this pioneer company is embarked on," according to the announcement.

One of the industry's youngest executives at 37, Stern has been associated with Ace since 1944 when he became production manager of the New Bedford plant. His extensive travels in recent years  
(Concluded on Page 4, Col. 5)

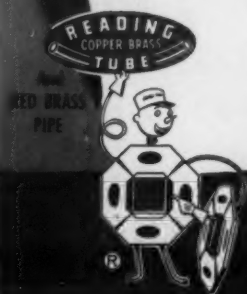




Dependable Prescription for Refrigeration & Air Conditioning Equipment

**R<sub>x</sub> Always Specify READING Copper Tubing**

Made by Copper Tube SPECIALISTS



**READING TUBE CORPORATION**

EMPIRE STATE BUILDING NEW YORK 1, N. Y.

WORKS: READING, PA.

San Jose, Calif. Area

## Contractors Join RACCA, Negotiate Refrigeration Agreement with Local

SAN JOSE, Calif. — Refrigeration contractors operating in the San Jose area have negotiated another refrigeration agreement with the refrigeration branch of Plumbers and Steamfitters local union 393 for Santa Clara and San Benito counties.

Contractors here were alarmed when they first received the proposed new agreement from business agent Rex V. Saunders. The proposal was a "plumbers and fitters contract," entirely different from the refrigeration agreement which expired Aug. 31.

Refrigeration contractors formed a local group, retained M. M. Smith, attorney and ex-

ecutive secretary for RACCA of Northern California.

Their offer, which has been accepted, provides an hourly increase in wages, with another increase a year from now. Contractors will also pay one cent an hour into an apprenticeship fund and five cents an hour for a separate refrigeration joint conference board.

San Jose area refrigeration contractors have joined RACCA of Northern California, and a San Jose area unit is being formed.

Air Conditioning Div.

## Theater-In-the-Round To Set Stage for G-E Distributor Sales Talk

BLOOMFIELD, N. J. — Theatre-in-the-round will set the stage for the General Electric Air Conditioning Div.'s show for its distributor meetings this fall in Miami Beach.

"First to be tried in the industry, this ancient Greek stage technique, employed successfully by many off-Broadway productions today, brings the audience seated on three sides into intimate association with the sales program being presented," it was pointed out.

To be held at the Empress hotel Oct. 14 through 18, these annual sales conferences are the first to be conducted on a consolidated product basis by the Air Conditioning Div.

Previously, each of the General Electric Air Conditioning product departments, comprising Commercial & Industrial, Weathertron, and Home Heating & Cooling components, held independent meetings.

R. H. Jones, general manager of the Air Conditioning Div., stated that steps for simplifying these independent meetings into one combined conference were dictated by a need for easier and faster communication between dealer, distributor, and product departments.

In line with facilitating greater communications, Jones stated the Air Conditioning Div. has established a coordinated and unified sales program for this year which will place the distributor, and especially the dealer, in a stronger competitive position and, at the same time, simplify their business procedures.

G-E's Air Conditioning Div. will preview some of its new 1958 models at these meetings for the benefit of its distributors.

A separate conference is to be held at the Flamingo hotel in Las Vegas Oct. 27 to Nov. 2 for its western group of distributors.

## '58 NAPC Convention Set

WASHINGTON, D. C. — National Association of Plumbing Contractors will hold its 76th annual convention June 30-July 3 in Los Angeles next year.

Convention sessions and National Plumbing and Heating Exposition will be staged at the Pan Pacific Auditorium.

When buying a low temperature system compare the total cost of all equipment including the coils, compressor and controls and you will find that...

### THERMOBANK SAVES DOLLARS ON COMPRESSOR COST

It uses a smaller horsepower compressor than all other systems for the same capacity; because only THERMOBANK can use a low temperature compressor without overloading the compressor motor.

### THERMOBANK PRICE INCLUDES ALL PARTS

It is complete; no extras to buy. Competitive systems require extras such as electric heaters, hand valves, electric lines, controls, insulation, etc.

### ONLY THERMOBANK ELIMINATES LIQUID DAMAGE

It provides an abundance of heat for positive liquid re-evaporation during defrost. Systems that depend on heat of compression as source of heat will circulate liquid. Liquid slugging results in progressive compressor damage and expensive repairs.

### ONLY THERMOBANK PREVENTS LUBRICATION FAILURES

With THERMOBANK oil stays in the crankcase. All other systems have a sharp reduction in suction pressure after defrosting, causing oil foaming and oil pumping, exposing the compressor to lubrication failures.

### THERMOBANK COSTS LESS TO OPERATE

It uses less electricity and operates fewer hours. Only THERMOBANK automatically regulates defrosting based on frost buildup and eliminates unnecessary defrosting cycles. It defrosts at any outdoor temperature and is very fast (all other systems require three to four times longer to defrost).

### ACTUAL USE PROVES THERMOBANK IS TROUBLE-FREE

THERMOBANK is the oldest and the only time-proven system that can assure an owner trouble-free operation without continual threat of system failure and loss of expensive frozen food.

WRITE FOR AVAILABLE LITERATURE

## KRAMER TRENTON COMPANY Trenton 5, New Jersey

44 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

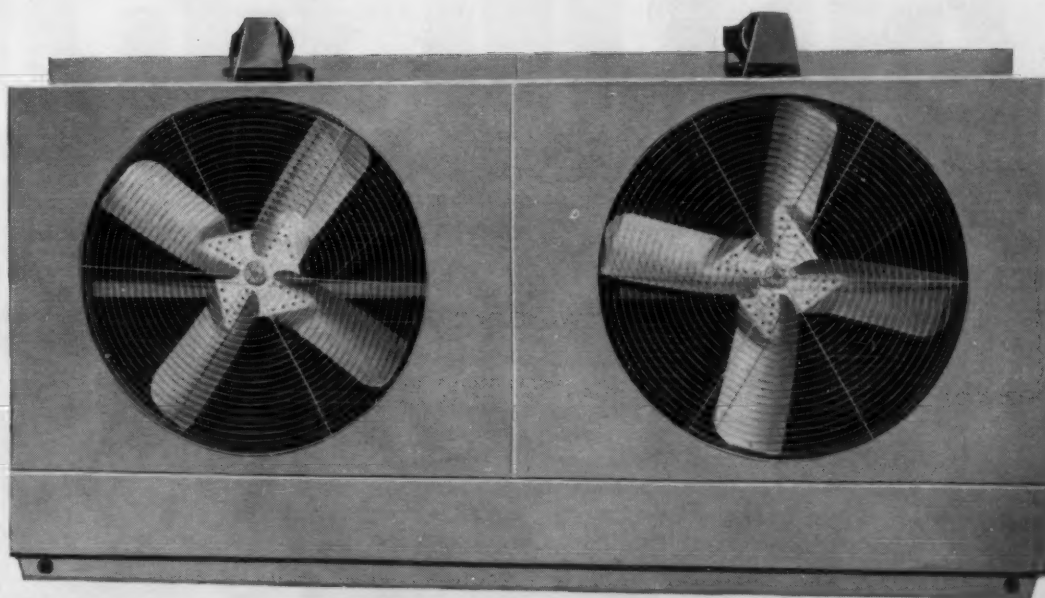
**WHY  
KRAMER  
THERMOBANK  
MAKES  
CENTS**

... it costs  
less to buy  
and less  
to operate



HALSTEAD & MITCHELL ENGINEERS PROVE . . .

# A 100-TON COOLING TOWER CAN BE QUIET



HERE ARE TWO, NEW LARGE SIZES ADDED TO HALSTEAD & MITCHELL'S  
COMPETITIVELY-PRICED EC COOLING TOWER LINE

**THE EC LINE.** The addition of the 80- and 100-ton capacity towers extends the range of the more-value-per-dollar EC line. All 12 models, 5 to 100 tons, have outstanding features never before offered in this price group.

These include increased corrosion resistance due to rugged, 14-gage steel cabinets (12-gage sumps on the largest sizes) —weatherized by application of Vinsynite, Vinyl Zinc, and Chlorinated Rubber coatings. Exclusively, H&M offers pressure-cresoted wetted deck surfaces with the industry's only 20-Year Guarantee against rotting or damage due to fungus attack. New, sealed fan bearings are lubricated for life. Gravity-type distributing pans reduce pumping head, and cut down windage losses. Sump water levels are automatically controlled by integral float valves.

**QUIET.** Large diameter, four-bladed, deep pitch fans are belt-driven at low speeds by special weather and splash-proof motors. The EC-80 and EC-100 are driven at speeds of only 400 and 450 RPM. They're really quiet! Twin fans and drives power the three largest sizes, and all fans are of zinc plated, chromate dipped mild steel.

EC Series Cooling Towers are available in capacities of 5 thru 100 tons in standard, factory assembled models, or as Take-Aparts (ECK Series) for difficult-to-get-at installations. Residential, direct-drive ECD Series, with all the custom features and also competitively priced, come in capacities of 2 thru 7½ tons. Call your nearest Halstead & Mitchell wholesaler for delivery and prices or write: Halstead & Mitchell, Bessemer Building, Pittsburgh 22, Pa.

WRITE FOR COMPLETE DETAILS





## ARW Meeting Schedule--

(Concluded from Page 1, Col. 2) day, Nov. 14, followed by two days of board of directors' meetings on Friday and Saturday.

Convention will get under way with a "Kickoff" luncheon at noon Sunday. Cliff Titus, supervisor of executive development, Beech Aircraft Corp., will speak on "The Magic of America."

Annual business meeting will run from 2 to 5 p.m. and will be followed by a meeting of the new board of directors. An officers' reception at 6:30 p.m. and annual banquet at 7:30 p.m. are slated for evening. The team of Bob James and Barney Richards will provide banquet entertainment.

At 9 a.m. Monday, the wholesalers will gather again to hear a panel discussion on "Look What Can Happen to your Business." John P. Glass of Chase

Supply Co., Chicago, will moderate.

Panelists include Peter H. Askew, Thermal Products, Inc., Los Angeles; Paul D. Cato, Texas Refrigeration Supply Co., Fort Worth, Texas; and Nedford K. Mason, Mason Supply Co., Columbus, Ohio.

Gerry Kinnally of James B. Clow & Sons, Chicago, will speak on "Merchandising" and will join the panelists for the discussion period which follows. Final gavel falls at noon.

### Air Terminal Cooled

ST. PETERSBURG, Fla.—A spectacular air show was scheduled to dramatize the Oct. 12 dedication of the new \$400,000 air conditioned terminal at Pinellas International Airport, according to County Commissioner R. Hosey Wick.

## 'Warmer than Normal' Seen for Most of Nation Hotel Reservations--

WASHINGTON, D. C.—Warmer than normal temperatures for a big part of the country are the U. S. Weather Bureau's official forecast for the month of October.

Above normal temperatures are predicted for the upper Mississippi Valley and part of the Great Lakes area, the Southwest, and the Far West.

"Much above" normal temperatures are predicted for the upper plains and Mountain states.

Near normal is the prediction for the northeast, lower Mississippi Valley, and part of Texas, and Florida.

Below normal temperatures were forecast for most of the southeast.

(Concluded from Page 1, Col. 3) St., Chicago, giving full information on type of accommodations desired, and proposed length of stay.

Following are the headquarters hotels for the various associations who will have meetings during, or immediately preceding or following, the Exposition:

Air-Conditioning & Refrigeration Institute (show sponsor) Sherman hotel.

American Society of Refrigerating Engineers, Shoreland hotel.

National Association of Practical Refrigerating Engineers, Del Prado hotel.

National Commercial Refrigerator Sales Association, La Salle hotel.

National Warm Air Heating & Air Conditioning Association, Morrison hotel.

Refrigeration & Air Conditioning Contractors Association, Drake hotel.

Refrigeration Service Engineers Society, Morrison hotel.

## 252 Set for ARI Show--

(Concluded from Page 1, Col. 2)

Mills also announced that Mrs. Charles V. Gary, whose husband is vice president and general manager of Henry Valve Co. and a member of the ARI board of directors, will head the ladies entertainment committee for the exposition.

Members of her committee include Mrs. H. T. McDermott, representing the ladies of re-

frigeration Service Engineers Society; Mrs. J. P. Glass, who represents the ladies of Air-Conditioning & Refrigeration Wholesalers; and Miss Edna Berggren, executive secretary of the Refrigeration & Air Conditioning Contractors Association.

Mills said that he expects more foreign visitors to the exposition this year than the 68 persons in 1955.



design for finish



## STRAIGHT LINE PRODUCTION TO A PERFECT FINISH

### EXTRA WORKABILITY

The proper kind of temper is vital in tube used for refrigeration and air conditioning purposes. VIKING Copper Tube has been produced with the best available annealing and tempering equipment, thus assuring perfect fabricating.

### ABSOLUTE, UNVARYING STRAIGHTNESS

A battery of straightening machines keeps VIKING Copper Tube absolutely, unvaryingly straight. In addition, these machines precisely temper the tube, imparting to it the correct surface hardness . . . assuring ease in fabrication resulting in substantial savings in time and labor.

### ELECTRONIC QUALITY CONTROL

An electronic "Brain" detects the minutest flaw or imperfection in the walls of VIKING tubes . . . automatically discarding defective tubes. Trouble-free fabrication is virtually guaranteed — operational failures almost completely eliminated.

Drawing techniques which produce copper tubes of highest quality are only part of the story of VIKING'S craftsmanship. The finishing bay takes over after all drawing operations have been completed.

Thin wall tube moves first through the electronic flaw detectors and through a preliminary straightening. Careful inspection at this point eliminates defects.

Tempering operations, cutting to specified length, de-burring and special cleaning all take place in this area before the final inspection and packaging.

Thin wall tempered tube is our business and we know our business.



# VIKING

## COPPER TUBE CO.

CLEVELAND 10, OHIO

PRECISION DRAWN SEAMLESS COPPER TUBE

## Cooling Drive--

(Concluded from Page 1, Col. 2) committee of the ARI section is said to be working to get the film under way.

Pointing out that "we have to do a better job of advising consumers on what they are buying, rather than promoting brand names and special features" if the industry is to get the public interested in preferring air conditioning over other possible purchases, Jones indicated that the program will strongly emphasize all the possible benefits from air conditioning, such as health protection, cleanliness, and the like.

The room air conditioner industry is concerned not only with its reported inventory of 750,000 units, but also because 1957 sales failed to show any appreciable gain over 1956 (although the performance was better than that showed by most consumer durable goods products).

Jones also said that the industry will continue its efforts to get a reduction in the excise tax (on room air conditioners under 1 hp.) from 10% to 5%.

## Stern Named--

(Concluded from Page 1, Col. 5) in connection with cabinet and refrigeration sales to the ice cream and frozen food industries have given him a practical insight into the needs of the trade, it was pointed out.

In assuming the presidency of Ace Cabinet, Stern stated, "Our primary aim is to provide the trade with the finest of refrigeration equipment that can be made, designed, and constructed to meet every conceivable requirement." He added that "we intend to pursue a forward-going policy."

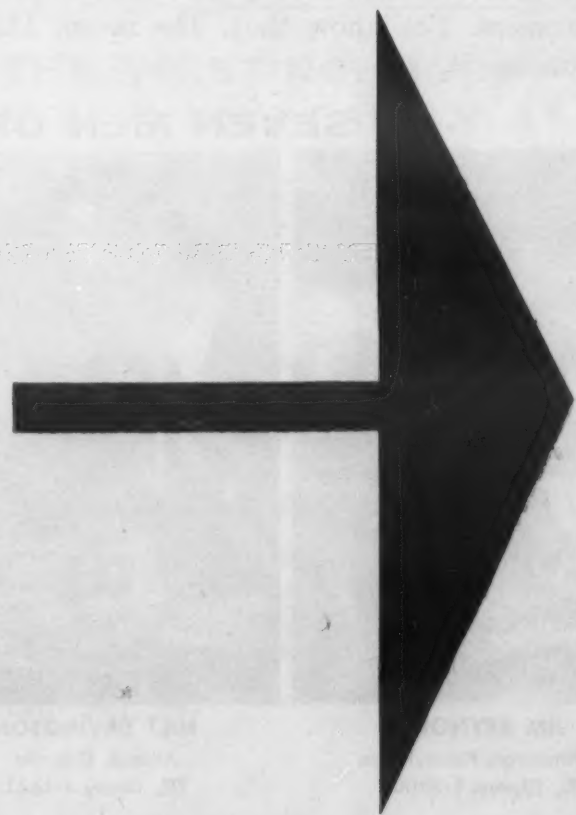
The largest advertising budget in the history of the company is being scheduled for fall and spring.

As part of the new development of the company, Stern noted the opening of a new factory branch at 321 E. 139th St., New York City, with Nelson S. Bloomenstein in charge.



*Open letter to all who sell or install  
central residential air conditioning*

# **WHAT THIS BUSINESS NEEDS IS A NEW WAY TO MANUFACTURE SALES!**







"No one can say that the air conditioning industry doesn't know how to manufacture good products. What's more, ours is one of the greatest products of the century! And with consumer benefits rarely equaled! But, do people know it? If they do—why, then, don't more people put it in their homes? How come the small profits? Is there something missing in the way we are conducting our business?"

*Bruce D. Henderson*

BRUCE D. HENDERSON, VICE PRESIDENT

## THE CONSUMER'S DOLLAR IS GOING TO THE INDUSTRY THAT GOES AFTER IT!

If central residential air conditioning is to achieve *real* volume—*profitable* volume—we have to stop letting people buy it! *We've got to sell it every step of the way.*

The automobile industry stopped selling cars as transportation years ago! Today they sell accessories—by their own admission.

Even sewing machines aren't bought for making stitches: today they make 'high style' possible at home.

Do you suppose that swimming pools are sold for exercise? No! Most certainly not.

Like it or not, we are in a competitive battle with every product that siphons off 'spendable' dollars that could go for air conditioning.

The dollars are there: it is just a matter of who's going to get them.

If *we* want those dollars, we've got to go after them! That calls for the greatest sales crusade this industry has ever seen. We have to *create a revolution inside the home.*

Because air conditioning offers a whole new way of living! Our products aren't simply mechanical boxes . . . nor should they be sold merely for cooling the home.

Rather, air conditioning brings a whole new *pattern for living.*

The immediate job we have is to raise our percentage of saturation by *only one degree!* Because a satisfied user becomes your best booster. His neighbors become your hottest potential customers. *You* know that. The recent DuPont survey substantiates it.

*What you and we need is more and more owners.*

And that calls for harder, even more aggressive selling.

But all areas are not alike. Air conditioning is purchased for different reasons. Even installation problems vary from job to job . . . and by locality.

Because this is a *local* business!

Like any business, this one is subject to change. And that change is coming faster than we may realize. There is a growing belief by sellers and installers of air conditioning that there *is* a *better, faster, easier* way! They are beginning to see a *mass market* just over the horizon—and *moving in fast!* They feel that air conditioning is about to step out of the specialty class and become really *big* business.

Many of these local air conditioning specialists are small. They *want* to grow with a growing market. They recognize that they must be ready to meet the demands that will be made upon them . . . *if* they are to reap the profits to which they're *entitled.*

Some have actually come forward and said . . . "*We need help.*"

Westinghouse is looking to these men of foresight and leadership to prove that this *is* the growth industry that people have said it is. They will show how this great business can be mushroomed far beyond expectations or present imagination.

These are the men who will build for themselves what may become one of the most profitable *local* businesses of all time.

J-80550

### SEVEN MEN OF ACTION—THE WESTINGHOUSE AIR CONDITIONING



JIM REYNOLDS  
Pittsburgh, Pennsylvania  
TEL. EXpress 1-2800



MILT BEVINGTON  
Atlanta, Georgia  
TEL. TRinity 4-1641



BOB HAUBOLD  
Dallas, Texas  
TEL. RIVERSIDE 1-5109



WALT HUNKEN  
Staunton, Virginia  
TEL. STaunton 6-0711



TOM MULLEN  
Chicago, Illinois  
TEL. WHitehall 4-3860



# NOW

... IF YOU ARE STAKING YOUR FUTURE ON  
WHAT WILL BE A SOLIDLY BOOMING BUSINESS—  
... CHECK THESE QUESTIONS CAREFULLY!

**Q** Are you getting all the business you want—and at prices that give you a good profit? Is your present product line complete—does it permit you to “bracket” the market?

**A** Westinghouse not only offers the most complete line of top-quality, soundly engineered units, ranging from 2 to 15 hp—but also has a built-in profit ratio that helps you get your price . . . lets you prosper.

**Q** Do you presently enjoy practical, professional help and guidance in planning, selling and financing? Are you being helped to prepare for the growth and expansion of this industry?

**A** Westinghouse is ready and able to give you just such help. We have a program that is designed for your special local requirements—one that gives you the opportunity for the profitable growth you want!

**Q** Do you presently have a tested and proven method for getting qualified prospects . . . and a sound plan for converting them quickly into profitable sales?

**A** Such a plan is ready for Westinghouse franchise holders. It has been developed by experts, exclusively for *local selling* of air conditioning . . . tested and proven successful *in the field*.

**Q** Are you being backed with advertising and sales promotion support that will make people think of you first when they decide to air condition?

**A** 1958 advertising strategy by Westinghouse will give you the *power* to really step up local sales. Both national and local support will be unique—different! Local promotions will be easy to use . . . and deliver *maximum* results.

## REGIONAL MANAGERS



**AL McDONALD**  
St. Louis, Missouri  
TEL. GARfield 1-6911



**BILL CONSTANCE**  
Los Angeles, California  
TEL. RAYmond 3-8953

**Q** Does your present line have basic household acceptance? Do people know it—have they confidence in it?

**A** The name Westinghouse is widely known, highly respected. It's an old household friend. And it's backed by research, engineering and manufacturing resources *second to none*. Coupled with a hard-hitting, soundly built *plan for business*, the Westinghouse air conditioning franchise is unique—and coveted. It offers an opportunity for *real success*! When it's Westinghouse, part of the selling job is already done.

• • •

**WESTINGHOUSE IS UNLEASHING A SALES ATTACK IN 1958 THAT WILL PUT DOLLARS IN DEALERS' POCKETS—DELIVER VOLUME AS NEVER BEFORE!**

On November 7, the first of two Westinghouse family meetings of air conditioning distributors and installing contractors will take place at New Orleans. The dynamic story of how to capitalize on 1958 opportunity will be revealed. New product lines will be shown. It will be the most progressive, realistic and down-to-earth air conditioning meeting ever. It will gear Westinghouse franchise holders to the hottest selling activity to ever hit the market.

For the convenience of Westinghouse distributors and installing contractors in the North, a second meeting will be held at Columbus, Ohio, on November 14. Same program. Same plan.

Pick up the phone and call your Westinghouse Regional Manager, now! Ask him about this tremendous new program. He can quickly answer the questions you'll want to ask.

**JOIN THE WESTINGHOUSE  
AIR CONDITIONING FAMILY AT**

**NEW ORLEANS—Nov. 7  
COLUMBUS, O.—Nov. 14**

BY INVITATION ONLY

**YOU CAN BE SURE...IF IT'S Westinghouse**

**WESTINGHOUSE ELECTRIC CORPORATION**

**Air Conditioning Division**

**Staunton, Va.**





## 750 Warehousemen To Gather In Dallas March 10-13, Hear Wheeler, Leopold Smiley Is Mfg. Chief At Weber Showcase

WASHINGTON, D. C.—The AWA Merchandise Div., will hold several general sessions, as well as conducting independent programs.

Over 750 warehousemen from all parts of the country are expected to attend and notable speakers such as Elmer Wheeler and Joseph F. Leopold will address the group.

## SMI Sets Mid-Year Conference Dates In Florida for Next 4 Years to '60

CHICAGO — Dates for the traditional mid-winter discussion meeting of top executives of the supermarket industry—the mid-year conference of Super Market Institute—have been set for the next four years, Don Parsons, SMI executive director, announced.

The newly-set schedule is as follows:

1957: Dec. 8-11, Americana hotel, Bal Harbour; 1958: Dec. 7-10, Hollywood Beach hotel, Hollywood Beach; 1959: December 1-4, Americana hotel, Bal Harbour; 1960: Nov. 27-30, Diplomat hotel, Hollywood Beach.

LOS ANGELES—Don Smiley, operations vice president for Honeycomb Co. of America, has been named vice president in charge of manufacturing for Weber Showcase & Fixture Co., Inc., according to Alexander Black, executive vice president of the firm.

Smiley replaces Fred Weber, brother of President Karl Weber and son of the founder, who is retiring to his ranch near Solvang, Calif. but who will continue to serve on the board of directors.

A Stanford university graduate, Smiley is not new to Weber Showcase. Prior to his four years with Honeycomb, he spent 10 years with Weber in charge of special contracts, plant engineering, tooling, and plant maintenance, it was further explained.

## Food Equipment Standards, Ordinances Seen Needing 'Right Kind of Program'

SEATTLE — Sanitarians attending the 21st Annual Educational Conference of the National Association of Sanitarians in Seattle were informed by Harvey F. Swenson, president of Sweden Freezer Mfg. Co., that equipment manufacturers feel present standards and ordinances regarding food service equipment are often just barely acceptable.

### 'LOCAL STANDARDS SHOULD FOLLOW PATTERN'

Participating in a panel discussion of food equipment standards and ordinances, Swenson stated "there is a real need for an organized program to get the right kind of standards and ordinances established locally, following a nationally approved industry pattern to avoid con-

tradictory standards between localities and states."

Moderated by Franklin H. Fiske of the Dept. of Health for the city of Denver and president-elect of the National Association of Sanitarians, the panel members included, besides Swenson: Vince Galvin, president of the Washington State Restaurant Association; Walter D. Tiedeman, executive director of the National Sanitation Foundation Testing Laboratory, Inc., School of Public Health, University of Michigan; and William F. Bower, R.S., Supervisory Sanitarian Restaurant and Ice Sanitation, Oregon State Board of Health.

Swenson, "long noted for his campaign to improve the sanitary features of construction and use of ice cream dispensing freezers," was outspoken in his statements on present sanitation codes and there was much favorable response to his views among the attending delegates.

As an example, Swenson cited that "when no adequate local standard existed, the opportunity was present for establishment of improper regulation, which benefits only special interest groups. In such instances, public health is used as the vehicle, but economic advantage is their primary interest."

### 'NSF STANDARDS PRACTICAL'

The standards developed by the National Sanitation Foundation were found by Swenson to be a practical approach for food service equipment in retail stores. He stated that although the standards developed by the 3-A Group might be suitable for milk product plants, they would be impractical and cost industry and the public a great many unnecessary dollars if enforced upon thousands of food handling establishments.

In his concluding remarks, Swenson made the point that well established manufacturers of equipment generally want their designs to meet the basic requirements of health ordinances. He pointed out that great care must be taken to insure that these ordinances must be kept to basic goals and specifications.

He expressed the belief that products which do not meet basic sanitation ordinances should be rejected and prohibited. He warned, however, that such rejections should never be marginal, for manufacturers will attack and often defeat a marginal rejection through court action, causing much of the other good work of the Health Dept. to be undone.

### Recold Story Slated For Far East Viewing

LOS ANGELES — Recold Corp.'s "Success Story" which was recently featured on a Los Angeles television station was slated to be shown in Manila, Singapore, Bangkok, and Hong Kong.

The half-hour film is being shown in these cities by Albert Rebel, president of Recold International, who is currently on a tour of the Far East.

For clearer display...for your own protection  
insist on THERMOPANE® INSULATING GLASS!



Customers see their favorite brands faster  
(and from farther away) . . .  
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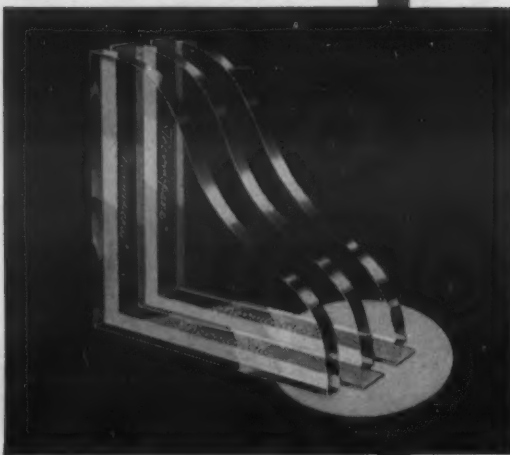
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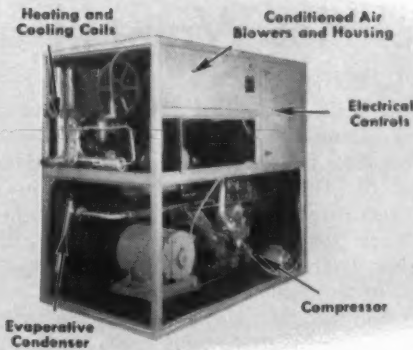
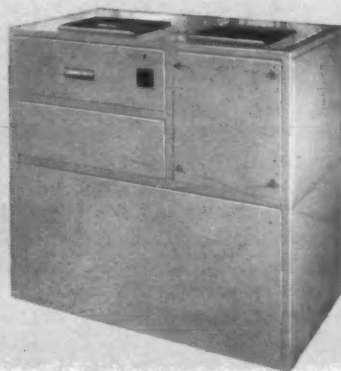


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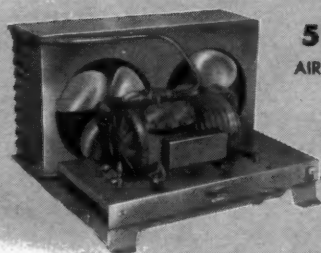
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Pre-engineered units . . . each a complete air conditioning system housed in one cabinet. Each unit is entirely self-contained . . . with evaporator, compressor, evap condenser and pump, fans, motors, piping and controls. Installation requires only connection to duct, power to control panel, and water make-up line.

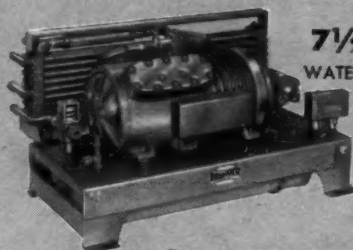
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**7 1/2 H.P.**  
WATER COOLED

**BRUNNER-METIC 3, 5 and 7 1/2 H.P. UNITS**

These 4 and 6 cylinder motor compressors and condensing units in 3, 5 and 7 1/2 H.P. units now offer you even greater flexibility in unit selection. Backed by the simplest, most complete, most satisfactory warranty program in the industry, together with a nationwide parts depot, you'll find the Brunner-Metic line a wise selection for all your refrigeration and air conditioning jobs.

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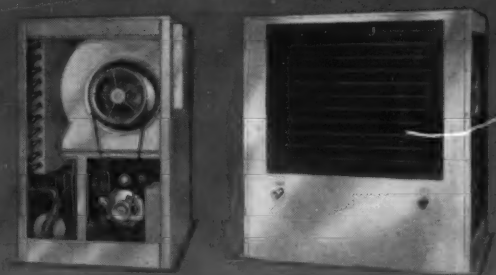
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These air cooled package chillers, designed primarily for residential air-conditioning applications, are furnished with 2, 3 or 5 H.P. compressors, Inner-Fin air cooled condensers, water chillers, superheaters, blower fan, and necessary controls. The cabinet is finished in blue aluminum paint.

RCU models (less water chiller) were designed for use with remote DX coils.

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## IBR Booklet Describes '5 Ways To Cool Hot Water Heated Home'

NEW YORK CITY — "Five and chilled water during the Ways to Cool a Hot Water Heated Home" is the title of a new booklet issued by The Institute of Boiler & Radiator Manufacturers, 608 Fifth Ave., New York 20, N. Y. Copies are available without charge.

Some of the methods described in the booklet involve a combination of the heating and cooling functions in the same equipment. Others involve a separation of the two operations.

The various methods are illustrated by sketches. The first sketch shows a combination heating and cooling system involving the use of fan-equipped convector units in each room of a house. The units are hooked up to a piping system which circulates hot water during the winter supplied by the boiler

and chilled water during the summer supplied by a water chiller, each operating independently.

The next sketch shows a split system in which baseboards or any other type of radiation are hooked up to the boiler for heating while self-contained room units (console or cabinet) provide summer cooling.

The third sketch shows a system which differs from the previously-described system in that it involves the use of a self-contained central cooling unit installed in the attic or dropped ceiling chamber.

The fourth system is also a split system but it has a chiller tied in with fan-equipped cooling coil units. The fifth system utilized baseboards for cooling as well as heating.

## Seeks \$10,000,000 for Research

## Sees Harnessing of Solar Energy as Possible Solution To World's Growing Power Problems and 'Way to Peace'

WASHINGTON, D. C. — "If man can harness solar energy he may solve not only the world's growing power problem but also pave the way for peace and plenty for centuries ahead," Rep. Craig Hosmer (R.-Calif.) declared recently.

Hosmer has introduced legislation calling for a \$10 million, 10-year solar research program aimed at "finding the key to unlock one of man's two remaining great sources of energy, the sun's rays." The other source he referred to was the thermo-nuclear power of the H-bomb, which he said was already under intense study.

He pictured solar energy as ultimately useful for "thousands of purposes" and immedi-

ately needed as a cheap power source for de-salting sea water, "thereby providing a solution to drought problems in the western United States and other arid areas of the world."

Hosmer said research and development work on solar power is proceeding at "a snail's pace" and should receive government assistance without delay. He was encouraged to introduce his legislation by two leaders in the field of science—Gen. David Sarnoff, board chairman for Radio Corp. of America, and Dr. Lee DeForest, inventor of the vacuum tube and "father of radio."

Hosmer's proposal would authorize the Secretary of Interior by means of research

grants and contracts with universities and private and government laboratories "to determine the best designs and conditions of operation of devices and techniques for the practical utilization of solar energy for other than high temperature solar furnaces."

Almost \$7 billion a year is being spent for scientific research in the United States by public and private agencies. However, John I. Yellot, executive director of the Association for Applied Solar Energy (Phoenix, Ariz.), estimated for Hosmer that not more than \$500,000 of that amount is devoted to solar research, most of it on solar furnaces for heat-testing various new metals, ceramics, and plastics.

"At the present time the commercial possibilities of solar energy appear too remote, in the opinion of most industrialists, to justify the expenditure of research funds," Yellot said.

"The situation is somewhat similar to the atomic energy field prior to World War II in that fundamental principles are known, but very little practical experience has been obtained with solar equipment."

In describing the power potential available from the sun, if means can be discovered to use it, Hosmer stated that solar energy falling daily on Lake Mead, Nev. exceeds the electric power produced by the lake's gigantic Hoover Dam generators.

In addition to basic research on the sun and its radiations, Hosmer pictured the 10-year research program as exploring four potential practical uses of solar energy: heat energy (photo-thermal); electrical energy (photo-electric); chemical energy (photo-chemical); and plant energy (photosynthesis).

Numerous heat energy uses, such as heating and cooling of homes and offices, cooking, refrigeration, thermal-steam turbines for pumping and power, seawater purification, and power for small industries in undeveloped countries was envisioned by the California solon.

## Fiberglas Expands Duct Materials Distribution

TOLEDO — "Fiberglas" duct materials, for heating and air conditioning units, are now being distributed on the local level to appliance and air conditioning equipment dealers, sheet metal contractors, and wholesale firms, according to Owens-Corning Fiberglas Corp.

The company's branch offices, located in 60 major U. S. cities, are making arrangements for the local distribution.

Owens-Corning says the duct materials, available with an aluminum foil vapor barrier for heating and air conditioning use, are easy to handle and convenient to stock and ship due to their light weight.

The company points out it will continue to supply Fiberglas materials to original equipment manufacturers.



He wouldn't be guilty of leaving fingerprints!

The hands that go into these goatskin gloves belong to a skilled worker in General Electric's new Tyler, Texas plant where whole-house air conditioning equipment is built.

The reason for the goatskin gloves? Even the barely perceptible perspiration that forms on human fingers would have an adverse effect on the compressors which are the heart of General Electric central system air conditioning. In any necessary handling before the compressor is factory-sealed for protection, goatskin gloves are worn.

This is an extra step we take—one of the many ways we safeguard the quality of our

products. And this quality control, standard practice at Tyler, Texas, is far-reaching in its effects. Wherever you may install General Electric Home Heating and Cooling systems it is your assurance of the kind of user satisfaction that means customer good will and continued profits. General Electric Home Heating and Cooling Dept., Tyler, Texas.

Progress Is Our Most Important Product

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## **"WHY THE BOSS GAVE ME A RAISE WHEN I SOLD ONLY 96 COMPRESSORS . . .**

"I'll call it the XYZ Company. But it's really a well-known manufacturer of air conditioning and refrigeration equipment.

"For a year I'd been calling on XYZ. The engineers, purchasing agent, top men—all of 'em heard our compressor story and reacted favorably. My hopes got pretty high. I even hinted big things in reports to my boss.

"One day the purchasing agent phoned to say he had an order for me. Right off I was in the

clouds. But then I found out the order was for only 96 compressors. Well, I was kind of disappointed because I'd hoped for a really big one.

"I called my boss long distance to give him the story. Do you know what he said? I couldn't believe my ears.

" 'Bill,' he said, 'we're giving you a raise, effective the first.'

"When the room stopped going around, I could hear the boss telling me lots of our customers

started with small orders—maybe a rush job, or just a trial order. But once they find out firsthand that we build dependable, long-lasting compressors and deliver 'em on time at competitive prices—then we're in solid. All the boss wanted was a chance to show them. That's why I got my raise. And it's also why XYZ is one of our best customers today."

*Moral: We'd like all your business, but we'll be very happy with 96 units for a starter!*

### ***Bendix-Westinghouse***

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*For more information about products advertised on this page use Information Center, page 26.*



## Inside Dope

By GEORGE  
F. TAUBENECK

(Continued from Page 1, Col. 1)  
taxi, Ike recounted. The cab driver pointed out a spot where a big Woolworth chain store had been torn down.

Several blocks later they passed a vacant building—which, the cabbie informed Secretary Mitchell bitterly, also had been occupied by a Woolworth "ten cent" store.

"This Administration is ruining small business," commented the taxicab pilot.

### Good Try, Good Future

As for the Small Business Conference itself, it was a noble experiment in do-it-yourself problem solving. Moreover, it turned out better than many conferees had supposed it might,

including this skeptical writer. In keeping with Ike's general philosophy of dissolving the superstate and returning power to the people, he had suggested this Conference to Wendell Barnes of the Small Business Administration. The latter snapped it up, and added a theme: RESEARCH.

It seemed to Barnes (after talking out the problem with "Red" Motley and other business leaders) that ability to finance technical research and market research was a major long-run advantage big business held over little business. (In his talk with us, Ike added "taxes" as another overbearing burden on small business. Amen!)

Anyway, after "Red" Motley of *Parade* and his associates had done the spadework, President Eisenhower sent out gold-embossed invitations to the gold-darndest assortment of so-called "little" businessmen ever assembled under one room.

They ranged from a San Diego laundryman and a New York fruit peddler, through second-hand furniture stores and giving-up-the-ghost appliance distributors, on to a lone refrigeration serviceman.

### Hooray for the Non-Conformists

Also present were a liberal sprinkling of college professors, association secretaries, and business paper representatives. Outside of the McGraw-Hill, Chilton, and Fairchild tycoons, the latter were genuine small businessmen, too.

You could identify the professors and the association secretaries readily. The former wore striped tweed jackets; the latter, mustaches.

The "little" businessmen came in all shapes, sizes, attire, and manners. They were gregarious and loud and morning drinkers; they were shy and unsociable;

or they were models of rectitude and decorum.

Some displayed flashy neckties and bought picture postcards. Others blended unobtrusively into the background, and bore bored expressions.

According to the bell captain at the Statler they either tipped dimes or dollar bills.

Evidently these small business delegates were successful. Yet, judging by externals, few of these individualists would pass inspection by a big corporation recruiter (whose standards were defined so dimly by William Whyte in his disconcerting book, "The Organization Man").

Late one night some of us tried to determine what, if any, generalizations could be applied to these "typical" small businessmen drawn from all over our nation. Our conclusions added up to three dubious negatives and two rugged positives.

(1) They weren't tall (most were shorties).

(2) They weren't particularly handsome and they didn't appear to be healthy (too many faces were pallor-grayish, lined, and taut). Overworked?

(3) They weren't conventionally well-dressed (white shirts, for example, were the exception) and obviously they didn't give a damn whether they were stylish or not.

(4) Their working energies, like their appetites for food and drink, proved them to be well-endowed physically—despite their unsuntanned, non-Brooks-Brothers outward facade.

(5) Whatever they said at any time on any subject frequently was interesting, often *challenging*, and occasionally *highly original*.

### What Really Happened?

Back to the Small Business Conference itself (and we hope you're still with us in this unorthodox review of so outstanding an occasion). For many of us it lasted three nights and three days, compartmented as follows:

(a) *Sunday night on the trains*: Preliminary conversations between total strangers about what good could come out of the Conference—which led into delightfully acrimonious arguments long into the night.

(b) *Monday-Tuesday-Wednesday daytimes*: formal speeches by an impressive collection of "brass" ranging from President Eisenhower through cabinet secretaries and college professors to the president of Dun & Bradstreet, Inc.

(c) *Monday-Tuesday-Wednesday nights*: formal and informal "workshops" (bull sessions). The small businessmen themselves wrangled through no-holds-barred discussions of research problems in 16 categories.

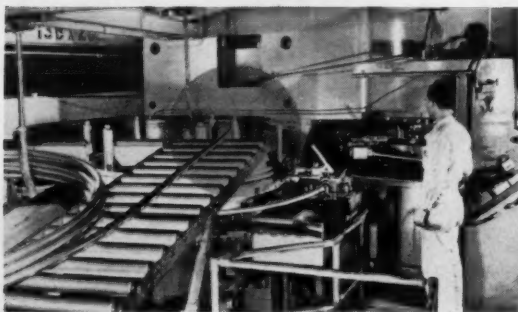
### Motley Is a Helluva Guy

Ashamed to admit it, but there have been times when "Dope" has envied and (humanly) even resented Arthur Motley, president of lively *Parade* magazine. Too often for comfort, after a banquet speech, somebody remarks: "You're the most stimulating speaker we've heard this year—next to 'Red' Motley, of course."

At this Washington conference we discovered that Motley, probably the greatest platform personality of our times, also is a great reporter and editor.

(Continued on Page 14)

## WOLVERINE SERVES THE REFRIGERATION INDUSTRY WITH:



New bullblock at Detroit plant.



Decatur, Alabama plant.



Detroit, Michigan plant.



Packaging U-bend condenser tubes.

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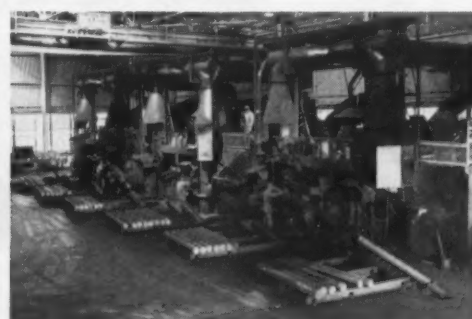
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E-Z-SEE Liquid Indicators with spring-compensated gaskets are positively leak-proof—proved by hundreds of thousands now in use. Suitable for Freon-12 and Freon-22 to pressures of 500 psi.  
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**WITH** *Chrysler's* **AIRTEMP**

**Another example of Airtemp engineering leadership—  
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**New Air-Cooled "Packaged" Units**

Airtemp now offers a wide range of big-tonnage *air-cooled* "packaged" air conditioning. Sizes now available are 2, 3, 5, 8, 11, 15, 20 and 30 HP.

**New Water Chiller Systems**

Airtemp's new centrifugal water chillers are now being produced in sizes up to 500 HP.

Airtemp's selection—the broadest in the industry—lets Airtemp dealers air condition *any* home, *any* building.

Whatever your customer needs—waterless or water-cooled—Airtemp has it. This includes central home cooling with or without a matching oil or gas furnace . . . every type of window air conditioner . . . "packaged" and central-station equipment for business and industry . . . even a new automobile air conditioner. Mail coupon for all the facts.



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for a Room, a Home, a Business,  
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☐ new models ☐ franchises

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## Inside Dope

By GEORGE  
F. TAUBENECK

(Continued from Page 12)

As co-chairman he scribbled notes industriously while others talked. When all the speakers had finished, Motley summarized their facts and ideas so trenchantly, wittily, and concisely that previously overlong and tiresome papers-read suddenly became alive and meaningful.

If we were wearing a hat these Indian Summer days, we'd doff it humbly to this brilliantly versatile man.

### 'I Didn't Get a Chance To Talk'

Supercharged Motleyisms notwithstanding (he alone was worth the admission price), quite a few conferees went home disappointed. Here's one reason

why: receiving that gilt-engraved Invitation from the President of the United States possibly was the most exciting thing that ever had happened to many of these obscured fellows.

"How about that?" they may have said to themselves, family, and friends. "After all these years of frustrations—now I can tell my troubles to Ike personally."

It didn't work out that way, of course. Ike opened the meeting, and then left hurriedly. President Eisenhower, you see, was distracted from Little Business to Little Rock that day. Shortly thereafter he made an agonizing decision—and sent paratroopers into Arkansas.

### What Does a College President Do?

Dr. Eric Walker, president of Pennsylvania State college, categorized himself as a BIG businessman. "I operate the biggest

restaurant in Pennsylvania," he observed. "It serves 30,000 meals a day."

"I operate the biggest hotel in Pennsylvania. Our 5,000 rooms are occupied to capacity seven days a week."

"How good a businessman am I? Annually we lose \$800 per customer-student."

To illustrate his thesis that a college president has a hybrid job, Dr. Walker told about three men who introduced and identified themselves on a train.

"My name is Smith. I am married, and I'm a university president. I have three sons, all lawyers."

"What a coincidence! My name is Johnson. I, too am married, and a college president. And my three sons are lawyers."

"Sorry to break up the pattern, fellows," third man lugubriously. "I am a lawyer. I'm not married. But I have three sons—all university presidents."

### Out of Our Mailbag

Typhoon Air Conditioning Co.  
Brooklyn, N. Y.

#### "Inside Dope"

Probably several people have already sent this in to you, but I saw it in Sunday's *New York Times*, and thought it something that you might want to reprint.

MARK E. MOONEY

"BRUSSELS, Belgium—Two Yugoslav refugees arrived here today after a five-day railroad journey across Europe in a refrigerated freight car filled with frozen meat. 'We kept alive on gin,' they told the police. Railroadmen discovered the two men, aged about 25 and 30, lying in the car."

\* \* \*

Penn Controls, Inc.  
Goshen, Ind.

#### Editor:

The following information illustrates just how far afield

the benefits of air conditioning reach.

On a recent trip to Tampa, Fla. I noticed a large sign outside a service station boldly proclaiming the following: "RELAX IN AIR CONDITIONED COMFORT WHILE WE SERVICE YOUR CAR."

They had one corner of the office fitted-out as a lounge, and the surroundings justified their claim.

J. B. CHOMEL,  
Sales Engineer

### Industry Ethics

Remington Corp.  
Auburn, N. Y.

George: The other day in St. Louis I picked up a little folder, unnumbered, undated, and unsigned, but obviously published by the Better Business Bureau. After using it for plane reading, it resulted in the attached letter to Mr. Kenneth Willson, president of the National Better Business Bureau.

The work that you have been doing to encourage honest practices is bearing fruit—but the fruit still is a long way from being ripe enough to be edible!

In general the ARI published ratings are beginning to make sense, but as the attached letter indicates, there are some flagrant exceptions.

I'd be very happy to have you publish the enclosed letter, should you see fit to do so.

HERBERT L. LAUBE,  
President

\* \* \*

Mr. Kenneth B. Willson, Pres.  
National Better Business Bureau  
Chrysler Building  
New York, N. Y.

Dear Mr. Willson:

This refers to your recent folder titled "Facts About Room Air Conditioners and Their Cooling Capacities." I am one of those who has always been in favor of cleaning up the room air conditioner over-rating mess. As such, I applaud the sincere efforts in this direction which the ARI Management and you are making. Nevertheless, it seems obvious that they and you still have a long way to go.

An analysis of the capacity ratings you effectively endorse, through publication, reveals:

1.— $\frac{3}{4}$ -hp. Units—Of 114 so-called  $\frac{3}{4}$ -hp. units listed, 113 have published ratings from a low of 5,000 to a high of 8,700 B.t.u./hr., with an average of 6,873 B.t.u./hr. The 114th unit is rated at 9,150 B.t.u./hr.

2.—Of the 159 so-called 1-hp. units listed, 156 have published ratings from a low of 7,800 to a high of 10,800 B.t.u./hr., with an average of 9,214 B.t.u./hr. The three remaining 1-hp. units are rated at, respectively, 11,300, 12,050, and 13,200 B.t.u./hr. Thus these three makes and models range from 23% to 43% above the averages.

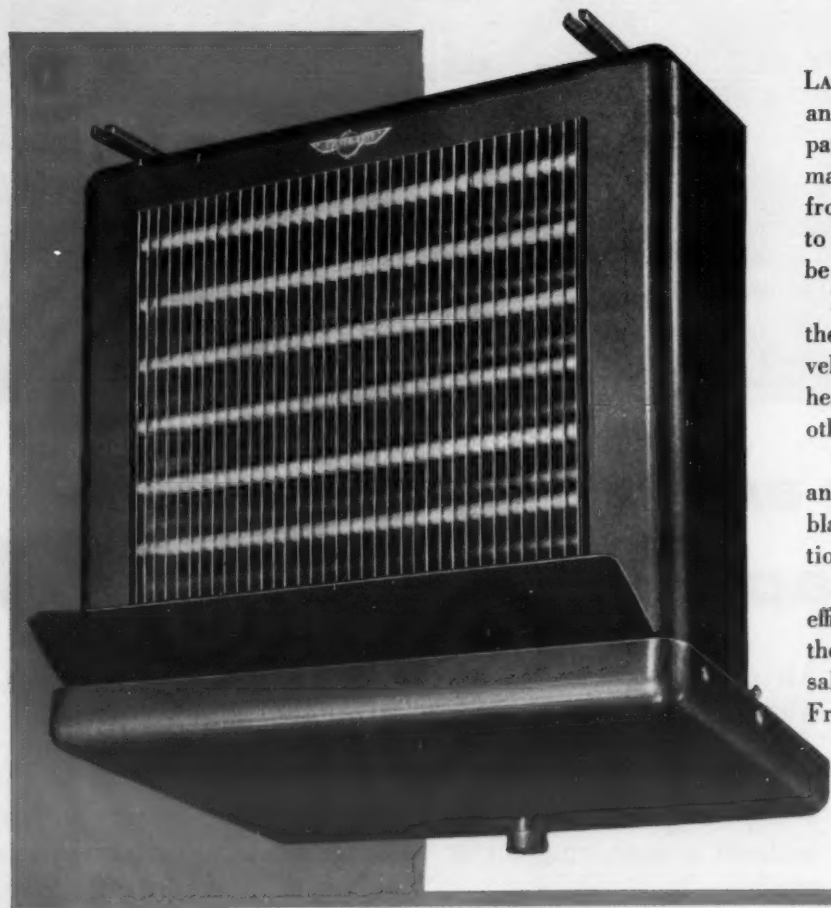
Two of the three makers of these highly rated units are relative newcomers in the air conditioning business. None of the three has previously been noted for unusual contributions to the technology of air conditioning. This, and the fact that these highly rated units use the same makes and models of compressors as are used in most of the other units listed on your sheet, raises a question as to the cor-

(Continued on next page)

# LARKIN PIONEERED

## THE USE OF US-KON<sup>®</sup>

### industrial heating blankets



LARKIN was first to recognize the need for an improved heating element in the drain pans of low-temperature units with automatic defrosting. Preventing drain pans from icing, and yet holding temperature rise to a minimum, was a problem that had to be solved.

Larkin engineers took their problem to the United States Rubber Company, developers of conductive rubber-imbedded heating elements for aircraft and many other heating applications.

U. S. Rubber engineers came up with the answer—the US-KON industrial heating blanket, especially designed for refrigeration applications.

This was the finishing touch to the most efficient, economical and trouble-free unit on the market. Get the facts from your wholesaler about the LARKIN Humi-Temp with Frost-o-Trol automatic hot gas defrosting.

### LARKIN LOW TEMPERATURE HUMI-TEMP

WITH

## FROST-O-TROL<sup>®</sup>

### AUTOMATIC HOT GAS DEFROSTER

- US-KON heated drain pan for positive drainage of melting ice and water
- Minimum temperature rise during defrosting
- No excess heat or moisture load
- Lower operating costs
- Higher efficiency of evaporator unit
- Heat applied throughout entire evaporator
- Melts frost from inside out
- Simple, low-cost installation



**LARKIN COILS INC.**

519 MEMORIAL DRIVE, S.E., ATLANTA, GA.—MURRAY 8-3171



## Inside Dope

By GEORGE  
F. TAUBENECK

(Continued from preceding page)

rectness of these high ratings.

The makers of these highly rated units owe it to the older members of the room air conditioning industry, from whom unquestionably they have learned a great deal, to disclose the secret of their unbelievable high capacities. This disclosure should include supporting data sufficient to enable others to verify the correctness of these published ratings. If these high ratings can *not* be verified in a neutral laboratory, then they should be immediately withdrawn and the fact of their withdrawal should be publicized, in fairness to the rest of the industry.

In view of the questionable ratings published therein, I believe that the distribution of your folder has been definitely premature. It puts the halo of respectability on ratings which most members of the industry cannot accept as accurate. It perpetuates these exaggerated ratings because your folder, although it refers to ratings which have been "reported to and released by the ARI to date" does not give a date. Finally, your folder puts a powerful tool into the hands of the unscrupulous seller who, by the use of your folder, can claim endorsement by both the ARI and the BBB, of his exaggerated claims.

Parenthetically, let me say a unit listed in your folder as having a capacity of 5,000 B.t.u./hr. was recently tested in accordance with ARI 110-56 in the laboratory of another ARI member with the result that the actual capacity was measured at 4,000 B.t.u./hr. While this unit is listed as a  $\frac{3}{4}$ -hp. size, this capacity is identical with that which a good  $\frac{1}{2}$ -hp. unit of three years ago should produce. In 1958 you will see on the market 115-volt room air conditioners rated at  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and 1 hp. claiming to draw  $7\frac{1}{2}$  amperes. Seems a bit silly, doesn't it?

### Modifications Suggested

In case you republish your 1957 folder for 1958, we would urge the following modifications:

1. That you suggest to the ARI that they set up a committee of Engineers to review ratings submitted to the ARI by manufacturers. This committee would be empowered to request detailed supporting data before authorizing publication by ARI of ratings which appear to be questionable.

2. That you omit the present implication that the B.t.u./hr. method of rating was not in general use in the room air conditioner industry prior to 1957. This method was in general use by the entire industry prior to 1954. Only after the degree of over-rating by many members of the industry had reached obviously ridiculous proportions did some makers rebel, and discontinue published B.t.u./hr. ratings.

3. That you omit the implication that prior to ARI 110-56

there was no standard basis for rating in use. The April, 1948 ruling of the Internal Revenue Service as to the units on which excise tax was payable, referred to rating the units in accordance with ASRE Circular No. 16. These standard rating conditions of the American Society of Refrigerating Engineers had been in general use for several years prior to that time.

4. That you add noise level to your list of factors which, other than B.t.u./hr. are im-

portant in selecting a unit. If you had ever spent a night in a hotel room equipped with some of the 1957 models listed in your folder, you would know that the average room occupant would gladly forget styling, shape, size, and color—yes, and even price—in favor of some *QUIET* comfort.

As already indicated, we applaud the attempt of the ARI and of your organization to clean up the room air conditioner rating mess. But it seems

a pity that some manufacturers should be using both organizations to perpetuate their established practice of improperly rating their units.

When one finds two or three rotten-eggs in a basket-full, the claim that the rest are fresh is unconvincing.

For 1958, it is our present intention to continue our practice of *not* publishing B.t.u. ratings. To do so would put us at a disadvantage as against units listed in your current folder, when

selling to the non-technical buyer interests your folder was designed to protect.

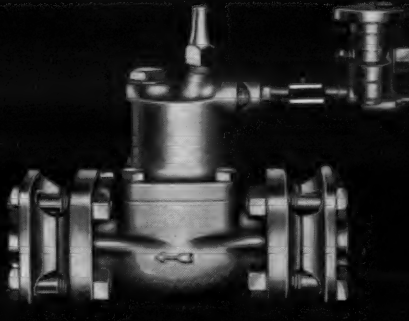
HERBERT L. LAUBE  
\* \* \*

Remington Corp.  
Auburn, N. Y.

Editor:

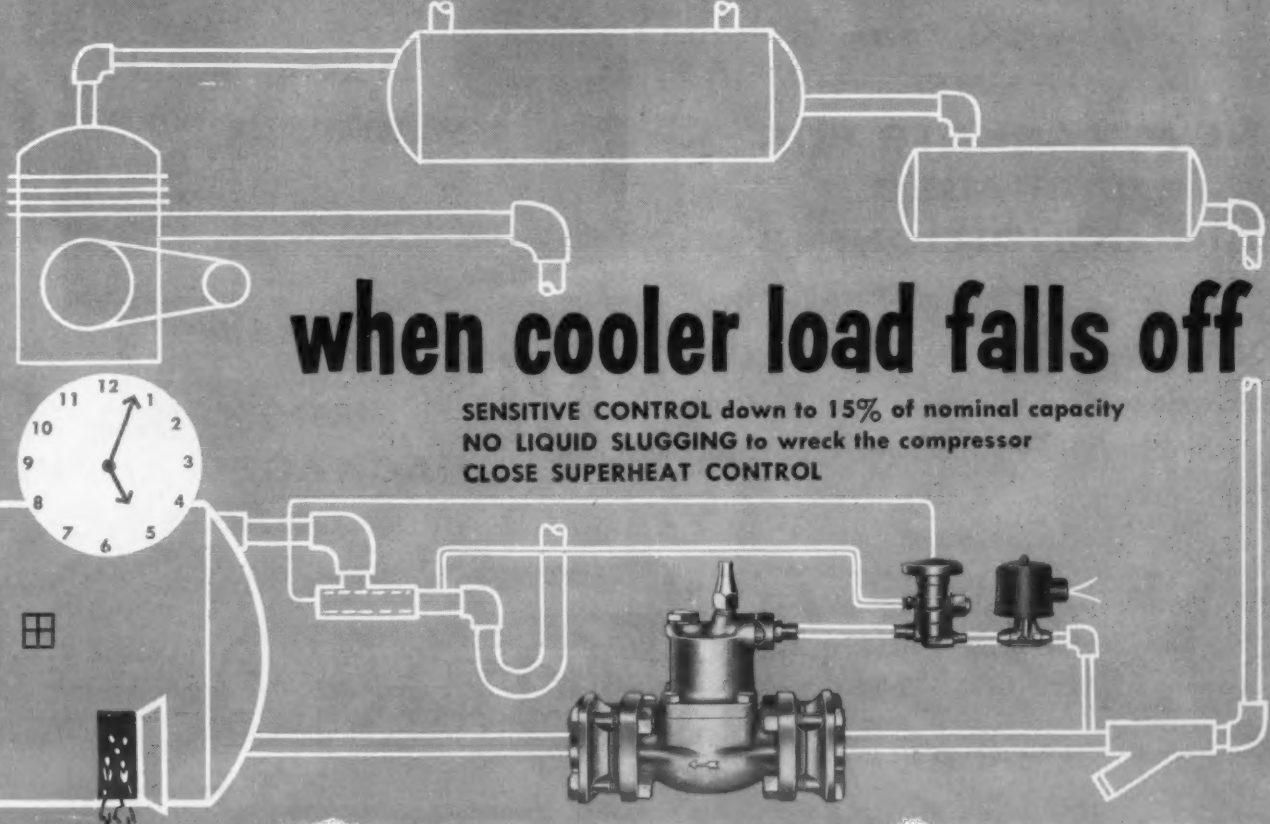
Further to my recent letter, the National Better Business Bureau claims to know nothing about the folder about which I wrote them on Aug. 7. Accordingly I have today written them

(Concluded on next page)



# alco's PO valve

## maintains control



## when cooler load falls off

**SENSITIVE CONTROL** down to 15% of nominal capacity  
**NO LIQUID SLUGGING** to wreck the compressor  
**CLOSE SUPERHEAT CONTROL**

That's why Alco is recommended so often for chiller applications with wide ranges of load and capacity.


Why worry about compressor failure?  
Install Alco and relax!

Capacities: 20 to 200 tons, F-12 and F-22

**Buy Alco . . .**  
The System Shows the Difference

Write for Bulletin No. 189-57

The one complete line of refrigerant controls that insures product quality: Thermostatic Expansion Valves, Refrigerant Distributors, Solenoid Valves, Suction Line Regulators, Flooded Evaporator Controls, and Reversing Valves.



## ALCO VALVE CO.

853 KINGSLAND AVE. • ST. LOUIS 5, MO.

SEE YOUR ALCO WHOLESALE



## Inside Dope

By GEORGE  
F. TAUBENECK

(Concluded from preceding page)  
and sent them a photostat of the folder. Copies of both are enclosed.

Maybe it is time that someone should organize a Better Business Bureau, to keep track of the existing Better Business Bureaus for the purposes of encouraging them to engage in better business practices!

Best regards.

HERBERT L. LAUBE,  
President

Mr. Allan E. Backman  
Executive Vice President  
National Better Business  
Bureau, Inc.  
Chrysler Building  
New York 17, New York  
Dear Mr. Backman:

What you say in yours of the

9th about not having published the folder referred to in mine of the 7th comes as quite a surprise.

I say this simply because, when I picked up the folder in question from one of our men in St. Louis, I assumed that an address had been omitted so that the same folder could be used by any Better Business Bureau anywhere in the country. This, in turn, would imply that it had been published by you.

A reduced photostat of the only copy of the folder in my possession is enclosed.

You will note it has neither an address nor a date. The publisher seems to be "The Better Business Bureau" which is akin to identifying printed matter as "The Chamber of Commerce."

To protect the standing of your own organization and its members, I am sure you bend over backward not to encourage

publishing anything as "semi-anonymous" as in the folder in question.

HERBERT L. LAUBE,  
President

### George Jones Cuts the Gordian Knot

Air-Conditioning &  
Refrigeration Institute  
Washington 6, D. C.

Editor:

In spite of everything that we have said in print and otherwise, that we are simply making available information supplied to us by manufacturers—which incidentally is identically the same position that the Better Business Bureau finds itself in—there are instances in which the publishing of this list has been considered as an endorsement.

ARI has never assumed the role of a policeman, although I am free to admit that, in my opinion, the time is not-too-far

distant when we will do just that.

Certainly we have not accomplished our objectives in getting capacity expressed in terms of ARI Standard 110-56, unless those ratings are correct.

We have taken one big step forward now that practically everybody in the industry is subscribing to this program by publishing their ratings with the statement, in writing, that the ratings are determined in accordance with ARI Standard 110-56.

The one big progressive step is that, for the first time, we have a statement that can be checked, whereas a statement of capacity without reference as to the conditions under which it was established means nothing and cannot be checked.

This is particularly important because we already have in this country machinery to penalize misrepresentation.

I am informed, for instance, that a complaint has been filed, by whom I do not know, with the Federal Trade Commission against one of the manufacturers who ratings are included in the list to which you refer.

Since you sent a copy of your original letter to George Taubeneck, who has provided such wonderful support to this program, I am also sending him a copy of this letter.

GEORGE S. JONES, JR.

### Form Distributorship In Coral Gables, Fla.

CORAL GABLES, Fla. — James R. Lowry, president of Lowry Electric Co., Inc., local electrical contractor and air conditioning distributor, announces the formation of Lowry of Florida, Inc., a new air conditioning distributing corporation.

Lowry of Florida, with offices, showroom, and warehouse located at 117-119 San Lorenzo Ave., Coral Gables, will operate independently of the electrical contracting firm, it was stated.

George F. Klein, sales manager of Lowry Electric during the past six years, is now vice president and general manager of Lowry of Florida. D. L. Moore moves from credit manager to comptroller and secretary, and Fred Bearden, Jr. is sales manager.

Lowry of Florida will supply 50 Fedders dealers in the 10-county territory.

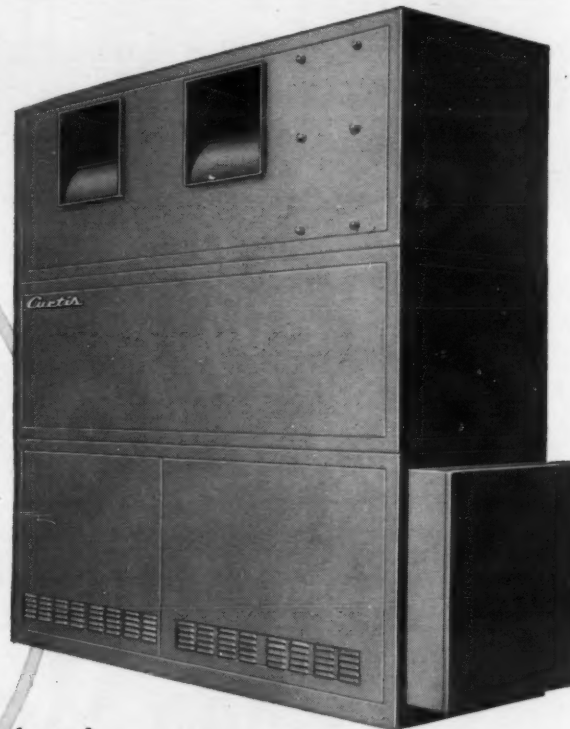
# NOW!

## Curtis

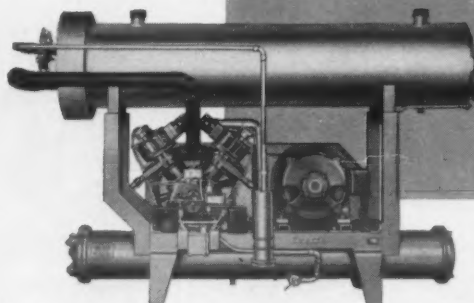
**PACKAGED UNITS  
Up to 50 Tons  
OPENS  
NEW MARKETS FOR  
PACKAGED  
AIR CONDITIONING**

No question about it. The new 50-ton Curtis packaged air conditioner will open a new sales front for you. Architects, engineers and owners prefer packaged units for important reasons:

- Big package units are line assembled—does away with expense of field labor. Assures a **BALANCED SYSTEM**.
- Packaged units are easier to install—take up less space.
- Cuts down installation problems and maintenance costs.



**IMPROVED  
PACKAGED LIQUID  
CHILLER...  
FOR  
WET  
HEAT  
SYSTEMS**



up to 100 tons—

With all controls in single panel box for easier access and greater protection! Four step capacity control—unloaded starting available. Particularly desirable where year 'round conditioning of multiple individual rooms is required.

**REMEMBER**, every Curtis unit is backed by a solid 103 years of experience and skill. Curtis offers a

complete line of air conditioning equipment—nationally advertised to help you sell.

CAN COUNT ON  
REMEMBER...

## Curtis

OUR 103rd YEAR



New Curtis Packaged, Air Cooled, Air Conditioning Units, 3 thru 7½ tons. Residential and commercial applications.



Condensing Units up to 100 tons. F-12 or F-22.



Air Handling Units, Cooling Towers and Evaporative Condensers to match.

**MANUFACTURING COMPANY  
REFRIGERATION DIVISION**

1912 Klenlen Ave. St. Louis 20, Mo.

CM-16

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Air Conditioning & Refrigeration  
Exposition—International Amphitheatre—  
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Give your key employees full equipment to do the job you want... **AND SAVE MONEY IN THE BARGAIN!**

Special group subscription rates are now available to you. Enter a personal subscription to the only newspaper serving the refrigeration and air conditioning industry for each of your key men. Copies of **AIR CONDITIONING & REFRIGERATION NEWS** will be mailed to each man's home address through your single order, if you wish.

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if a salesman makes one extra sale  
if an employee saves one production step

**THE NEWS WILL HAVE PAID FOR ITSELF!!**

Send your list directly to  
Circulation Department  
**Air Conditioning & Refrigeration News**  
450 W. Fort St., Detroit 26, Mich.



## Kansas Utility Says July Room Unit Sales Double Same '56 Mo.

WICHITA, Kan.—Kansas Gas & Electric Co. reported room air conditioner sales by retailers in its service area for July at 3,330, more than double the June figure of 1,332.

July sales were over twice the July, 1956 figure of 1,428. The first seven months' total this year was 6,052, as compared to 5,749 for the like period in 1956.

The utility noted that window air conditioner sales "skyrocketed from a dismal year-to-date deficit of 37% in June to top the '56 total for the first seven months by 5.3%."

Central air conditioner sales in July amounted to 155, as against 148 sold in the previous month. July, 1956 sales were 321. The first seven months' totals were 571 this year, against 633 in 1956, a 9.8% drop.

Home freezer unit sales of 246 were a little better than June sales of 197, but below the 330 figure of July, 1956. Total sales to July 31 were 1,535, down 9.7% from the 1956 figure of 1,699.

Domestic refrigerators sold in the quantity of 987 in July, compared with 613 sold in June. The July figure in 1956 was 1,072. First-seven-months' sales were 4,700 as compared to 5,039 for the period in 1956, a deficit of 6.7%.

Total appliance sales for the first seven months of this year reflected a slight downward trend from 46,091 in 1956 to 42,860 in the first seven months of 1957.

But, the utility pointed out, "the long-awaited break in the air conditioning market pushed total appliance sales for July to a fat 11,665—second highest on the records for this area."

## G-E To Unveil '58 Room Units At Havana Confab Oct. 13-19

LOUISVILLE, Ky.—Havana, Cuba will be the scene of the unveiling of General Electric Co.'s 1958 room air conditioner line at meetings held in the Hotel Nacional Oct. 13-19, according to a G-E official at Appliance Park here.

Dealers and distributors will attend in two separate groups, the first arriving the 13th and leaving the 16th, and the second group spending the 16th through the 19th on the island.

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on Room Air Cond. Covers

Send for the New 1957  
Directory & Alphabetical Guide

Top Quality, Low Prices,  
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JIFFY COVERS CORP.  
614 Third Ave., N.Y. 16, N.Y.

### Reprints Available

Hermetic Compressor Design,  
Development, by Henri Sou-  
merai. Only 40¢ each.

Mail this ad with name and  
address to: Air Conditioning &  
Refrigeration News, 450 W.  
Fort St., Detroit 26, Mich.

# Says Carrier Room Conditioner Retail Sales Up 50% In '57

SYRACUSE, N. Y.—A 50% increase in room air conditioner retail volume has been achieved by Carrier Corp. in 1957 despite a slight drop in sales of this product for the entire industry, Cloud Wampler, chairman of the board of Carrier Corp., declared here.

The Carrier chief executive spoke to more than 200 representatives of the nation's leading appliance and department stores and some 75 key distributors at the introduction of 1958 room air conditioner models.

He predicted his company would continue to expand its

share of the retail market which he estimated at 1,750,000 units for the industry in 1958.

Commenting on the featured product at the meeting—Carrier's new lightweight portable—Wampler said it "will prove a real stimulant. It will open many homes to the first sale and its versatility will also attract second unit purchasers."

Turning to central air conditioning of homes, Wampler told the group of appliance and department store representatives that most of them would be investigating this field of activity seriously and soon.

"Obviously, entering residential air conditioning is not as easy as taking on a new line of washers," he said. "There are technical considerations in providing proper application, installation, and service. But depending on your particular type of operation, it can be done and you will find profit in it."

Among other Carrier executives participating in the two-day program were William Bynum, president; Lyle C. Harvey, senior vice president; Russell H. Gray, vice president and general manager of the Unitary Equipment Div. which produces

room air conditioners; William C. Egan, room air conditioner manager; William Lake, divisional sales manager; George T. Long, divisional marketing director; Leslie M. Beals, director of advertising and sales promotion; and John Voigt, room air conditioner sales promotion manager.

## Firm Gets Charter

NEW ORLEANS—Schulin's Refrigeration, Inc. here has been granted a state charter to deal in refrigeration equipment, air conditioning units, and major appliances.

# BOHN EXPANDS EXTRUDED TRIM FACILITIES TO ALL INDUSTRY!

One of America's oldest extruders, with years of  
anodizing and fabricating experience, Bohn now offers:

- Complete facilities for plain and color anodizing, decorative painting, silk screening, buffing, etching, chemical brightening, fabricating!
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**Aluminum and Brass Corporation**

Detroit 26, Michigan

REFRIGERATION AND AIR CONDITIONING PRODUCTS • EXTRUSIONS • CASTINGS • FORGINGS • PISTONS • BEARINGS • BRASS ROD • BRASS AND BRONZE INGOTS

For more information about products advertised on this page use Information Center, page 26.





# How To Avoid Pitfalls In Air Conditioning Service Work-1

## Service Operator Develops Answers, Finds Part-Time Help for Summer Rush

By George M. Hanning

ST. LOUIS—Plagued by nuisance calls that eat up your hoped-for profits on service contract work?

Maple Service Co. here has come up with an answer to that problem that works like a charm, according to Company President Louis Pocsai.

Pocsai has also developed some good answers to other problems that bother service operators. He has, for instance, found a bountiful source of part-time help for summer rush periods.

### Keeps Close Tabs On 'Forgetters'

He has worked out a record system that keeps close tabs on "forgetful" customers and servicemen even during days when the firm may be handling up to 150 calls and dispatching from 15 to 20 servicemen.

His vice president, William Kovacik, an experienced service manager, also offers some pungent thoughts on how to avoid pitfalls now appearing in air conditioner work.

Maple Service Co. devotes its efforts almost entirely to service. It does factory authorized service on several makes of room air conditioners, residential packaged units, and auto air conditioners for dealers and distributors covering a wide mid-western area.

### Offers Room Unit Service Contract

The company also offers an installation and one year's service contract on window air conditioners which dealers sell to their customers. It is with this contract that Pocsai has worked out his successful method of eliminating nuisance calls.

He accomplishes this through two coupons attached to the customer's copy of the contract. The customer is told the coupons will be redeemed at \$2 each by Maple Service within 10 days after the contract expires.

### Picks Up Coupon On First 2 Calls

"The customer, of course, will get as many service calls as he needs during the life of the contract," Pocsai explained. "But on the first two calls, the serviceman picks up a coupon.

"Knowing the coupons are worth \$2 apiece makes the customer think twice before calling a serviceman to change a filter or because the room does not seem cool enough.

"The \$4 we may have to refund is well worth spending to save the servicemen's time during busy periods. It has worked out real well for us," Pocsai said.

### Simple Contract Form

The contract form is simple to use, yet impressive to look at. Printed on a long strip of blue paper of cardboard thickness, it measures 5¾ in. wide and 17½ in. long.

The form is divided into four parts, separated by perforations. The first 3¾ by 5¾-in. section is dealer's copy of contract. This

folds over onto the second part, which is the same size. The second part, a return postal, serves as installation request and service contract authorization to Maple.

By slipping carbon paper between these parts, the dealer can type the information required on both at the same time. This data includes customer's name, address, and telephone number; the dealer's name, address, and telephone number; the model and serial number of unit to be installed, and delivery date.

Dealer mails the postal to Maple and gives customer re-

mainder of the form. Latter includes customer's copy of contract and two coupons.

A red scroll border around customer's copy makes it look "official" as it spells out just what Maple will and will not do under the contract.

Reading it, customer learns that he is entitled to normal installation to his electric outlet, one-year service, and all parts as per factory warranty.

### Service Calls Only In Regular Hours

Conditions printed on reverse side tell him that service calls will be made only during regular working hours. These conditions exempt replacement or repair due to causes beyond Maple's control, exempt Maple

from liability due to existing rates for moving and rewiring, call for payment of regu- installing the air conditioner during the period of contract, void contract if work performed by others affects performance of unit, disclaim responsibility for Maple's failure to perform under contract if failure is caused by factors beyond the company's control, and exclude replacement of filters.

"These forms cost about two cents apiece," Pocsai commented, "but they are worth their weight in gold."

He said that Maple currently has 400 to 500 such contracts in force.

The company also offers three other services to room air conditioner owners.

For \$30, a serviceman will pick up the customer's air conditioner at end of cooling season, bring it to the shop, steam clean it, lubricate it, touch up paint job of cabinet, store the unit for winter and reinstall it in spring.

If that seems like too much money, Maple will remove the unit from window, store it in customer's basement, and reinstall it in spring for about \$15.

If even this is too much, Maple will sell a cover for the unit.

### Expects To Store 300 Units In Winter

We stored between 150 and 175 units in our shop last winter and expect to store about (Concluded on next page)



engineering

offers you a

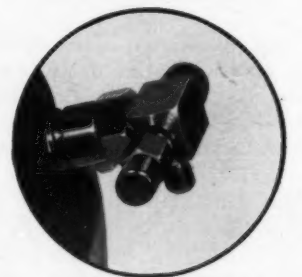
**complete line for year-around air conditioning, priced to expand your market!**

By continuous improvement and expansion, Tecumseh hermetic compressors today represent the most complete and up to date line in the industry. And as an example of our constant cost reduction program, the Tecumseh 3 HP single phase compressor shows an overall price reduction of 24% since 1953 in spite of continually rising prices.

Tecumseh compressors effectively utilize suction gas to dissipate motor heat — run smoother and quieter — deliver full capacity at 90° ambient with a 45° coil . . . continue to cool even at 120° ambient or at 90% of rated voltage! Tecumseh mass production facilities offer economical choices of hermetic compressors in:

- Horsepower ranges from 1 to 5 HP
- BTU ratings from 10,700 to 62,500
- Internal and external mount models
- Single and three phase
- Air or water cooled application
- Low sound level operation
- Optional oil level sight glass
- Choice of tubes, solder valve, or Rotalock Valve

Your best interests are continually served at Tecumseh. Write your Tecumseh District Office for the best solution to your central system requirements today!



**ROTALOCK VALVE—** Multi-position, detachable valve — permits positioning of suction and/or discharge connections at any angle throughout 360° while maintaining a positive pressure seal.

## THE COMPLETE COMPRESSOR LINE—ENGINEERED



Models B1516, B1613

1 HP, single phase, twin cylinder. 11,500 and 12,350 BTU ratings. External mount, air cooled compressors charged with F-22. Primarily designed for self-contained air conditioners.



Model B32P16

1½ HP, single phase, twin cylinder. 16,500 BTU rating. External mount, air cooled compressor charged with F-22. Ideal for small attic installations, operated singly or in tandem.



Models B74T16, B21T18

2 HP, single phase, twin cylinder. 20,000 and 23,400 BTU ratings. External mount, air cooled compressors, charged with F-22. 2 HP compressors designed to broaden the central systems market.



The Leader Serving Leaders In The Air Conditioning And

**TECUMSEH PRODUCTS**

EXPORT DEPT. — P.O. Box 2280, 24530 Michigan Ave.,



**DEALER**

This copy to be detached for your files.  
Fold along dotted line and insert carbon paper.

**VORADO SERVICE CONTRACT**

No 1002

This contract expires one year from date of delivery.

Date to be installed: \_\_\_\_\_

Contract and warranties not valid unless this card is mailed in by dealer at time of sale.

**Installation Request**

Customer Name \_\_\_\_\_ Address \_\_\_\_\_

City \_\_\_\_\_ Phone \_\_\_\_\_

Dealer \_\_\_\_\_ Address \_\_\_\_\_

City \_\_\_\_\_ Phone \_\_\_\_\_

Vorado Model \_\_\_\_\_ Serial No. \_\_\_\_\_

**MAPLE SERVICE CO.**  
3348-50 Greenwood Blvd. St. Louis 17, Missouri Mission 7-3290

**AUTHORIZED Vorado SERVICE**

Customer Name \_\_\_\_\_ Address \_\_\_\_\_

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

This is to certify that in consideration of payment on this contract, the original purchaser, whose name appears on this certificate shall be entitled to the following services until \_\_\_\_\_

1. Normal installation to electrical outlet provided by customer.
2. Service for one (1) year from date of installation.
3. All parts as per factory warranty.
4. Two (2) refundable service coupons. These to be detached by Maple Service Co. technician at time of first and second service calls. In event these coupons are not used, a refund of \$2.00 each will be made if returned to Maple Service Co. within ten (10) days after expiration of contract.

**THIS CONTRACT NOT TRANSFERABLE AND VALID ONLY WHEN AIR CONDITIONER IS USED NON-COMMERCIALY**  
All terms of this contract subject to conditions on reverse side.

Dealer \_\_\_\_\_ Address \_\_\_\_\_ City \_\_\_\_\_

**MAPLE SERVICE CO.**  
3350 Greenwood Blvd. Mission 7-3290

Valid only when signed by accredited Representative of Maple Service Co.

**SERVICE COUPON**  
No 1002

This Coupon is detached by Maple Service Co. representative at time of service call according to provisions of attached contract.

DATE \_\_\_\_\_

CUSTOMER SIGNATURE \_\_\_\_\_

ADDRESS \_\_\_\_\_

**SERVICE COUPON**  
No 1002

This Coupon is detached by Maple Service Co. representative at time of service call according to provisions of attached contract.

DATE \_\_\_\_\_

CUSTOMER SIGNATURE \_\_\_\_\_

ADDRESS \_\_\_\_\_

MONEY SAVING service contract form that's worth its weight in gold to Maple Service Co., St. Louis. Coupons on right are worth \$2 apiece to customers.

## Service Work --

(Concluded from preceding page)

300 this winter, Pocsai said. Such work helps keep the nucleus of Maple's service force together during the off season, he noted.

Before offering such a service, it is wise to make a few points clear to the customer at the very start, Kovacik cautioned.

First of all, specify a deadline for re-installation of the unit. This deadline should come before any prolonged hot spell is expected.

"If you don't do this, and make an additional nominal storage charge for units kept after that date, customer will put off installation until the weather gets hot—even if it takes until July. Then he expects you to put the unit in right away—just when you are busiest."

### Replace Only In Window From Which Removed

Also state that you will re-install the unit only in window from which it was removed, Kovacik warned.

"If you don't, oh brother!" he rolled his eyes. "The customer will want it in another window where it won't fit. We've had them ask us to put a regular unit in a casement window. Or they will want it in another room—usually bigger. If the unit won't cool it, then it's your fault."

### 'Not Responsible for Sealed Unit Failure'

A third point—very important in this and coming years—specify that you are not responsible for sealed unit failure while the unit is in your possession.

"It could happen that a unit operates perfectly when you store it away in the fall. But when you start it up in the spring, it goes blooey. Then you lose your complete charge of refrigerant.

"Some room air conditioners—quite a lot of them—are going into their fifth year. Next spring they will be out of warranty.

"Unless the service firm protects itself, it will be blamed for failures that are no fault of its own, even though the customer thinks they are."

(To Be Continued)



## TO YOUR INDIVIDUAL SYSTEM REQUIREMENTS



SINGLE PHASE

Models JE200, JB200, JE300, PJE300

2 and 3 HP, twin cylinder. BTU ratings from 22,500 to 38,000. All models except JE200 charged with F-22. Internal mount hermetic compressors available for air or water cooled operation. Designed for



THREE PHASE

complete flexibility, along with economical mass production to fill the exacting requirements of the year-round air conditioning customer.



Model FB500

5 HP, single phase, four cylinder compressor. 62,500 BTU rating. Charged with F-22. Fully hermetic external mount compressor for large residential air conditioning and similar applications.

Refrigeration Industries

**COMPANY**

West Dearborn, Michigan

MARION, OHIO

TECUMSEH, MICHIGAN



## Arkla Gas Air Conditioning Plans--

(Concluded from Page 1) have been able to make of the cost level, including advertising, promotion, and research and development expenditures," he said, "indicates that the manufacture of 4,600 units at these prices is about at the break-even point."

"We must increase production appreciably above the 4,600 unit level in order to make this a successful project."

For the gas companies' pledge, he said, Arkla "has agreed to a special package sale price of \$1,295 for a 3½-ton 'Sun Valley' unit and a TF 10 cooling tower, and a price of \$1,695 for a new 5-ton Sun Valley unit and a TF 15 cooling tower, f.o.b. Evansville, in carload lots."

"As a further consideration for the price reduction, the par-

ticipating companies have offered to pay for such purchase commitments in monthly installments.

"Arkla will provide storage facilities in Evansville until Jan. 1 free of charge to those companies that desire it. Storage facilities will be available for a longer period for a reasonable charge to be worked out later."

"A minimum order of 25 units is required to obtain the above prices and terms."

"Sales to customers under conditions other than the above will be made at prices quoted in the existing Servel price list of May 28, 1957."

Hamilton announced that after a two-week shut down period, the Servel plant resumed operations on Oct. 7. A firm delivery schedule for all models

will be in effect by the end of the month.

"Warranty protection will continue to be effective on all products. Our best efforts will be directed toward fair and equitable adjustments and the ultimate satisfaction of customers," he said.

### Spare Parts Inventory

"A factory spare parts inventory is being built up to the required level and a study is under way to determine locations throughout the country where stocks necessary for adequate service to the customers may be carried to the greatest advantage."

Hamilton announced that W. G. Wepfer has been named sales manager for Arkla.

"Sales headquarters will be maintained initially at Evansville," he said, "until a complete program can be developed and put into effect. Then the

sales manager will establish headquarters in Little Rock, Ark. In the absence of Wepfer, R. L. Eskew, assistant sales manager, will be available."

Hamilton emphasized that "Servel, Inc. has no part in the new company management but, if and when required, arrangements have been made for consultation service for a five-year period."

### Recognize Need For Large Ad Program

He indicated that the new firm recognizes that large amounts of money must be spent on national advertising and promotion and on research and development.

"A vigorous and intensive research and development program is being projected to improve the present product and to add other equipment as customer requirements develop."

"Initial working capital will

be in excess of \$1,000,000 and a greater amount will be required as production increases."

"We estimate that the manufacture and sale of a minimum of 10,000 to 12,000 units per year will be required to justify the large expenditures necessary to the success of the new company."

### 'Gas Companies Must Take Responsibility'

Hamilton asserted that Arkla's sales experience in recent months "convinced me that the gas companies themselves must take on the prime responsibility of connecting the air conditioning load if an adequate job is to be accomplished."

"Gas companies have the greatest incentive—attachment of a very desirable additional load and the blocking of the electrical competition—and they can install and maintain the units at the lowest cost to the customer."

"Gas company sponsorship and guarantee of adequate service and maintenance are two of the deciding factors in a success program to sell air conditioning."

"I realize that some of the companies cannot merchandise the equipment themselves, but I urge you wherever possible to take on the sales job and where you cannot sell the equipment at least handle the service on it."

### Service Schools Being Set Up In Evansville

He promised that service schools are being established in Evansville and instructors will be made available for field training as quickly as possible.

Hamilton charged that the long-time complaints "You can't sell gas air conditioning," "the price is too high," and "people are not ready for air conditioning and central heating in this area," are nothing but excuses to cover failure to use the required effort.

Arkansas Louisiana Gas Co., of which he is also president, has sold 266 units since the middle of February, Hamilton related.

Although there are several technically trained air conditioning engineers in the sales department, the bulk of the sales have been made by managers, meter readers, office employees, and by satisfied customers.

"We have backed up the sales program with an intensive local advertising campaign. We have promoted all-gas homes, distributed booklets, and followed all of the usual devices of sales promotion procedure."

"These have been an important element in our program, but I attribute the major portion of our success to an intensive sales effort by all company employees."

"In Nashville, Ark., which has a population of 3,500, we have a local manager who has sold, in the period from March 1 through Sept. 15 this year, a total of 27 'All-Year' gas air conditioning units and installed them himself."

"Nobody ever told him he couldn't sell gas air conditioning. Nobody trained him. He just went out and sold them. Your employees can do a similar job."

## THE MUELLER BRASS CO. ALL NEW

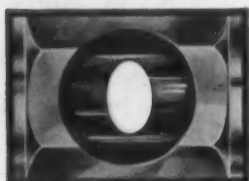


### THE MOST VERSATILE EASY-TO-READ LIQUID INDICATOR YOU CAN BUY

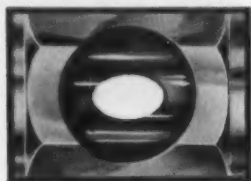
Now you can get a Liquid Indicator loaded with deluxe features at an economy price. The versatile new Sightmaster is exceptionally rugged and has withstood test pressures over 500 p.s.i. . . far exceeding normal operating conditions. The spring compensated "O" rings maintain a constant leakproof seal, and automatically adjust to any variation of temperature or pressure . . . it just can't leak. Straight-thru design eliminates pressure drop. Sightmaster incorporates a positive light refraction method of reading . . . there are no moving parts or fragile devices to get out of adjustment. Write today for additional information and see Sightmaster's outstanding features for yourself at your wholesaler's.

### get a positive reading at a glance with *Sightmaster*

Position of the oval image in the port indicates refrigerant supply. If the oval is at a right angle to the flow, the system is fully charged. If it's parallel to the flow, the refrigerant supply is low.

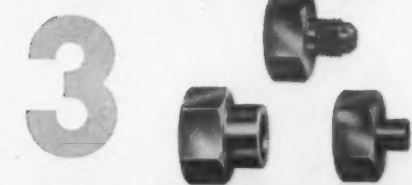


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### the right combination for any situation with minimum parts to stock



### 1/4", 3/8" and 1/2" sizes give you



### different size style combinations

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225



# Consent Order

## FTC Tells Vendo To Make Vendorlator Patents Available to Its Competitors

WASHINGTON, D. C.—The Federal Trade Commission ordered the Vendo Co., Kansas City, Mo., said to be the nation's largest manufacturer of soft drink bottle vending machines, to make available to competitors those patents for coin-operated bottle vending machines which it acquired by absorbing a major competitor, Vendorlator Mfg. Co., Fresno, Calif.

The Vendo Co. consented to this order of divestiture. It was contained in an agreement between the company and the Commission's Bureau of Litigation and was approved in an initial decision by Hearing Examiner Frank Hier, which has been adopted by the commission.

The commission's complaint, issued Oct. 11, 1956, had alleged that Vendo's acquisition of Vendorlator on Sept. 18, 1956, may lessen competition or tend to create a monopoly in violation of the Antimerger Law (Sec. 7 of the Clayton Act). The combined sales of the two companies, the complaint charged, represent over 50% of all coin-operated bottled soft drink vending machines sold by an industry of only approximately 16 members.

The agreement provides that the public record in the case should reveal Vendo's contention that Vendorlator successfully competed in the business only because of its infringement of a basic patent held by Vendo, and, upon prosecution of its rights under the patent, Vendo would have eliminated the company as a significant competitor. (Usually, in a consent order, the record states no findings of fact.)

The agreement also provides that a showing was made in the record that Vendorlator probably had infringed upon one of Vendo's basic patents for about two years, and at the time of acquisition over 80% of Vendorlator's production was of such machines.

The examiner declared that competition would be stimulated by requiring Vendo to license the former Vendorlator patents to existing competitors or new entries in the field. To require Vendo to sell them under an order of divestiture, he con-

tinued, "would have the effect of again limiting the availability of these patents to a single manufacturer."

Accordingly, the order specifically provides that Vendo shall divest itself of exclusive rights to those Vendorlator patents which do not infringe upon those held by Vendo.

The order also prohibits Vendo from acquiring "directly or indirectly" for 10 years the capital stock or assets of any

company in the United States which makes and sells vending machines built to dispense bottled drinks.

Finally, the order forbids Vendo, after one year, from manufacturing vending machines under the Vendorlator patents, except for replacement purposes, and from using the trade-mark "VMC" on goods it makes or sells. Vendo shall retain title to this trade-mark and shall permit others to use it on machines made under patents formerly owned by Vendorlator.

The agreement is for settlement purposes only and does not constitute an admission by the company that it has violated the law.

## Commercial Refrigeration



NEW LINE of coolers and freezers manufactured by the C. Schmidt Co. of Cincinnati features a galvanized steel floor flush with the door, which is said to reduce cleaning time and improve sanitation. A special abrasive material is used to make a safe non-skid surface. Model LTA is shown here.

30

Up to 30 tons  
IN A SINGLE UNIT

WITH THESE REMOTE

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Air Cooled Condensers

for Waterless Refrigeration and Air Conditioning

Here is the finest, the most efficient, most versatile and the most complete line of remote air cooled condensers on the market.

McQuay Aircons are designed in two types—direct drive models for commercial and industrial air conditioning and refrigeration applications, and belt drive models up to 30 tons capacity in a single unit for larger condensing requirements, such as air conditioning and refrigerating supermarkets, shopping centers, office buildings or large industrial plants.

All McQuay Aircons are designed for multiple circuiting, so that two or more separate refrigeration systems can be connected to the same condenser.

Full Winter Efficiency with McQuay "Seasontrol"

McQuay Aircons operate at peak performance in winter as well as in summer. The McQuay "Seasontrol" modulates the condenser capacity in accordance with the weather for proper operation at all times.

For best results with waterless air conditioning or refrigeration, look to the McQuay Aircon line of remote air cooled condensers with Ripple Fin coil construction, of course. There is a McQuay representative in every principal city, or write McQuay, Inc., 1607 Broadway St., N.E., Minneapolis 13, Minn.

McQuay  
Means Quality

AIR CONDITIONING • HEATING • REFRIGERATION



McQuay "AB" Belt Drive AIRCON

remote, waterless condensers available in six sizes, 9, 11, 15, 20, 25 and 30 ton nominal capacities in individual units with single fan and motor assemblies. Coils constructed of copper tubes with McQuay Ripple Aluminum Fins. Lifetime ball bearing and slow speed propeller type fan.



McQuay "AD" Direct Drive AIRCON

remote, waterless condensers available in 2, 3 and 5 ton nominal capacities. Quiet propeller type fan, statically balanced. 3/4 in. O.D. copper tubes, vertical free draining parallel feed. McQuay Ripple Fins pressure bonded to copper tubing.

McQuay INC.

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**HOPES ORDER WILL COME FROM CHAOS**

The Ebco Mfg. Co.  
Columbus, Ohio

Editor:

When you talk about Deans, I think of college days in Ann Arbor—sleigh rides—buggy rides—old fashioned stuff, so thanks for the buggy ride you presented in your editorial on dehumidifiers.

I hope there are no implications of responsibility, for certainly, I am not proud of the erratic course of dehumidifiers

over their brief history. I hope out of the seeming chaos of overproduction, underproduction, close-outs, and below-cost selling, that some order will eventually emerge.

Certainly a dehumidifier is a "mighty midget" with myriad uses.

We're glad to have taken a part in its development and promotion.

A. R. BENUA,  
President

**HOPES REED ARTICLES WILL CONTINUE**

Temple, Texas

Editor:

My sincerest gratitude that you are re-publishing the columns by the late Paul Reed in AC&RN. I had the pleasure of meeting Mr. Reed in San Antonio, Texas. Upon being introduced to him, he retorted, "How Protective is an Oil Film?" the title of an article he had published for me several months prior. Such an alert personality

I shall never forget.

Am currently employed by a company utilizing about five thousand tons of industrial equipment.

Fellow maintenance personnel there read his works with equal enthusiasm. May an influx of letters justify your staff to keep alive the devotion of Paul Reed to the industry for many years to come.

WILSON J. MALCIK

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They'll  
Do It  
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## Decentralized Distribution Policy Challenges Local Merchandisers

A TOP producer of consumer durable goods recently announced major innovations in its distribution philosophy. These changes reflect new thinking and viewpoints about the role of the dealer, distributor, and contractor. Said innovations in distribution policy included:

1. No list prices will be established by the manufacturer. Distributors will set the prices.
2. Each distributor will be totally responsible for marketing operations in his area.
3. A separate service division has been established to give the latter "the stature, dignity, and voice of a product division."

Thorough examination of each of these points reveals problems which have beset those who merchandise durable goods—and attempts at solutions. Factory established list prices have been virtually meaningless for many years, for example. For the most part, they merely have been a take-off point from which the bargaining begins.

**Idea of distributors establishing** their own fair price is a sound approach to the problem. And decentralization of marketing policy—which makes possible local accommodations to fit the needs, customs, and practices of specific areas—makes sense.

Marketing methods and policies vary widely between metropolitan New York and small communities or medium-size cities throughout the rest of the country. They vary greatly within a relatively small geographical area, as a matter of fact.

**A lot of noise has been made** about "new methods of getting goods to the consumer" as practiced in some metropolitan areas. That some practices have been mentally and emotionally jarring to all retailers generally, witness the story told by a veteran sales manager in our industry:

"A dealer in a medium-size town in the midwest was beating my ears with horrendous tales of what discounters were doing to him and to the business generally. I listened politely, and finally asked him to name those in the locality who were indulging in these practices. 'Well,' he er-erred, 'there really isn't anyone operating like that around here, but that so-and-so in Chicago—'"

To be sure, there are certain sound mer-

chandising and operating principles which can be profitable to retailers and contractors in any part of the country. One of the functions of an industry newspaper is to bring these principles to its readers—to describe in detail how good marketing policies are put into practice.

Nonetheless, there remain many phases of marketing and many problems which are peculiar to the particular area involved, and which might best be handled by giving those on the spot the authority to deal with such problems as they see fit.

**Increased emphasis on service** is a development which *had to come*. Consumer's rising ire at shoddy, irresponsible installation and service, often accompanied by gouging charges, has resulted in an almost violent reaction. Daily newspapers have taken notice of the situation. In some areas legislation has been passed to place restrictive controls on service company operations. Most damaging reaction from incompetent and irresponsible service work is destructive word-of-mouth criticism of the products of an industry, or the products of particular manufacturers within an industry.

Solution to the problem could be three-fold. First, a selling job must be done to get the dealer to recognize that service is a necessary part of his operations, that it can be profitable, and that he needs to recruit new personnel for service and maintenance work.

Secondly, widest possible dissemination of information on modern service methods and procedures in service operations is required. Finally, there must be *promotion of a desire* to perform service work in an efficient and conscientious manner.

On all of these points AIR CONDITIONING & REFRIGERATION NEWS is striving to help, and can be of more assistance with greater cooperation from manufacturers of equipment, parts, and supplies.

**Many of our subscribers yearn** for the "good old days" when list prices meant something and margins were firmly fixed. It may be that this era in merchandising has passed forever. Yet, it is refreshing to see efforts being made to keep shoddy new trends from riding off into a melee which would mean profits for no one, and which would abet antipathy for our industry's products by the purchasing public.



*'Everybody Wants To Get Into the Act!'*

## Has Warm Air Contractor Refused To Become An Air Conditioning Specialist?

SAN FRANCISCO — "Up to this point the warm air heating contractor has refused to accept the challenge of the air conditioning industry and absorb it unto himself and make it his own by becoming an air conditioning specialist."

This was the charge hurled at assembled heating men at the recent summer convention of National Warm Air Heating & Air Conditioning Association here by E. A. Myers, Jr., vice president and general manager of Prentiss Corp.

Commenting as moderator of a panel discussion on air conditioning sales, engineering, installation, controls, and service, Myers wondered "if actually the air conditioning business is something that you warm air people think you are really in?"

Tossing a "little pepper in the pot," Myers said "we may be justified in questioning the function of the warm air installer in the air conditioning business."

Not only heating installers, he continued, but plumbers, electricians, refrigeration contractors, and even appliance dealers and discount houses have been brought into the air conditioning business.

### BLAMES CONTRACTORS FOR PROBLEMS

"Now, gentlemen, whose fault is that?" Myers wanted to know. He placed the blame on the warm air contractors, "because you have been too content to be an air conditioning installer. And, as such, the industry is being driven into the same cut-price, cut-throat, competitive position that the heating industry has suffered from for so long."

He told the assemblage, "you heating men have every available facility. You have a head start on every other field of endeavor to get into the air conditioning business with both feet."

"But you must remember that it is going to take a terrific amount of investment of time and education and money."

"Your hundred dollar furnace is replaced by a thousand dollar air conditioning system. Your sheet metal man will be fooling around with controls and burning up compressors that may cost \$750 to replace—if they happen to have voided the warranty."

"So gentlemen, we are not

talking about peanuts," he emphasized. "And, believe me, the business does not belong to you exclusively."

### 'MFR. NEEDS GOOD MEN AS INSTALLERS'

"The manufacturer needs good people to sell and install his equipment."

He didn't say he needed you. He said he needed good people.

"Peddlers are a dime a dozen. Bidders are a dime a dozen. But well qualified heating and air conditioning contractors, who can sell, install, service, and engineer their air conditioning jobs, are going to be at a premium."

## 6 Technical Studies To Guide FHA

WASHINGTON, D. C.—Federal Housing Administration recently contracted with the National Academy of Sciences calling upon the Building Research Advisory Board of the Academy to undertake six technical studies for the betterment of residential construction and reduction of home ownership cost.

Under the contract, BRAB advisory services will require selected committees of the board to study and report on the following two things among others: Properties of materials used in warm air heating and air conditioning ducts, and need for a moisture barrier in slab-on-ground construction.

The board will offer advice and make recommendations to guide FHA in establishing criteria for its minimum property standards.

## ME-13 Home Air Conditioning Bulletin Only 'Interim Measure' FHA Indicates

WASHINGTON, D. C.—The Federal Housing Administration's Mechanical Engineering Bulletin ME-13 on residential air conditioning, issued last August, is an interim measure pending the publication of complete Mechanical Equipment Standards, Fred W. McGhan, chief of the FHA's mechanical engineering section, said recently.

It was issued, he said, to permit the use of single room air conditioners in FHA insured homes, according to new FHA policy, in time for the new building season.

The Mechanical Equipment Standards are still in a state of flux with extensive changes in the heating and hot water heat-

ing requirements under consideration.

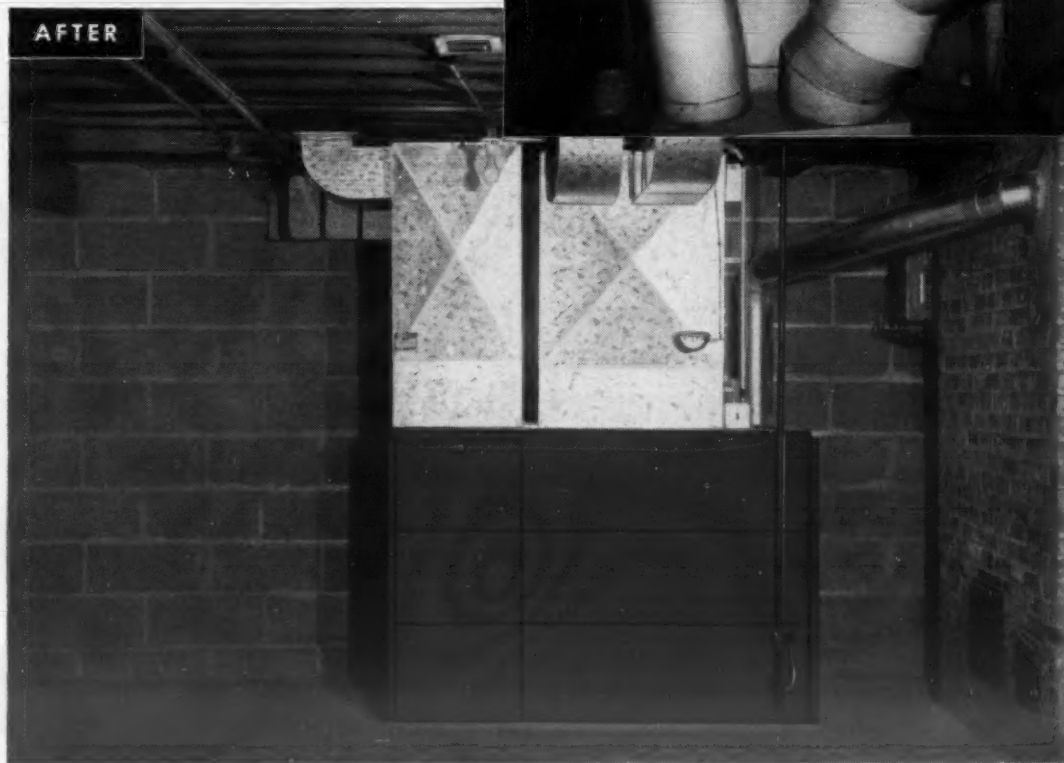
With the builders and equipment manufacturers far apart on what changes should be made, he indicated that the new standards may never be adopted.

### A. F. Hubbard Named To Head ASHAE Sound, Vibration Unit

MOLINE, Ill. — Arthur F. Hubbard, chief engineer of the Herman Nelson Div., American Air Filter Co., Inc., has been named chairman of the Technical Advisory Committee on Sound and Vibration Control, of the American Society of Heating & Air-Conditioning Engineers, it was announced here.

## Rich replacement market wide open to man who sells Mueller Climatrol

### Heating modernization tops the list of home improvement needs



BECAUSE the majority of the nation's homes were built before 1941... because addition of summer cooling plays the lead role in many modernization plans — the profit opportunities in existing homes have never before been so ripe. It's a big potential that's doubly inviting for Mueller Climatrol dealers.

First, you're teamed with a famous name, recognized and accepted everywhere — backed by a national program that presells Mueller Climatrol, makes prospects receptive to your follow-up efforts.

What's more, you have a complete heating and cooling line to offer — the right unit for every home and every budget.

#### Ad mats available

To help you further, Mueller Climatrol gives you an array of promotion aids, including dozens of newspaper advertising mats designed to ring up replacement sales. Send for yours now!

## Mueller Climatrol

Division of Worthington Corp.

2056 W. Oklahoma Ave. • Milwaukee 1, Wisconsin  
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### "Stick" to satisfied customers with handy installation decals



Don't throw away the opportunity for future business. With these low-cost installation labels, you keep your name "on the job." When a customer needs a cooling unit, your name is there. When he needs service, it's a handy reference. Be sure to use these self-adhesive labels whenever you've completed a job—they lead customers right back to you.

MUELLER CLIMATROL SALES CLIP...  
...CLIMATE CONTROL FOR HEALTHFUL LIVING



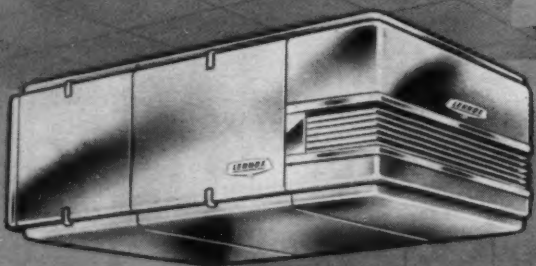
**MIGHTY MITE**  
THERMAL PROTECTORS

**FOR MOTOR OVERLOAD PROTECTION**

**MECHANICAL INDUSTRIES PRODUCTION COMPANY**  
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# NOW there IS something new in commercial air-conditioning



**Exclusive LENNOX Power Props**  
*move floods of air for the quietest,  
most efficient cooling yet*

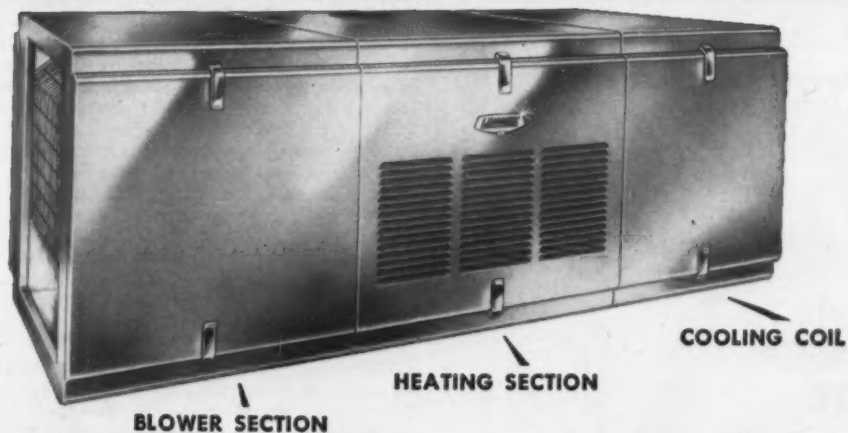
Now you can provide your customers with condensing units that actually cost less to operate. And for your commercial customers, that is important. There are several reasons for the economy of Lennox—one of them being the twin Power Prop that makes ordinary blowers obsolete. The new 7½ ton condensing unit requires only a ¾ h.p. motor, while 10 tons are tamed by a single horse power motor! Operates at about HALF the power cost of most units. Truly "new from the sound up" ... a real profit maker for today's alert dealers.



Attractive horizontal cooling coil unit may be suspended from ceiling. Has floating blower and adjustable air vanes. Can be ducted if desired.

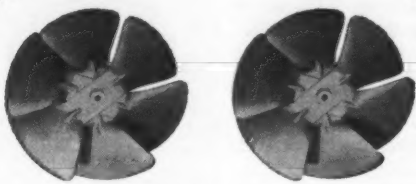
# LEN

**How Heating Can Be Added  
For  
YEAR 'ROUND  
COMFORT**



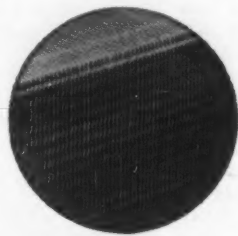
A Lennox horizontal unit can be installed with a neat, out-of-the-way system for dependable, all-season comfort.





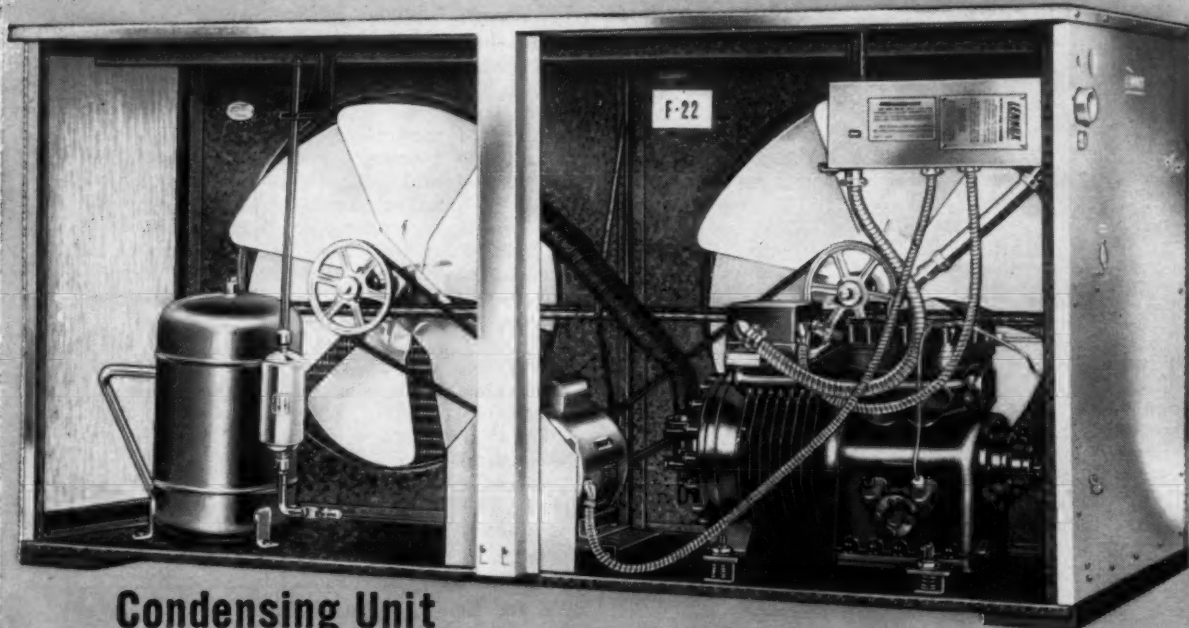
### Twin Power Props

Big overlapped blades of unique shape—handle huge volumes of air with exceptional quietness and efficiency. Single motor operates both props.



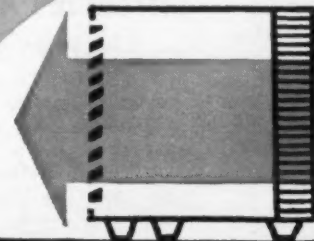
### Flat Flanged Fins

Flange of fins lie flat against tube for strong, positive fit and superior heat conduction. Rippled edge provides rigidity—to remain properly spaced.



### Condensing Unit

Heavy duty weatherized cabinet is hot-dipped galvanized—then finished with a baked on resin enamel. Rigidly braced and reinforced. Deep coil fins and overlapping louvres protect from weather. Interior lined with thick Fiberglas insulation. Note semi-hermetic compressor is spring mounted.



### Straight-thru Air Flow

Air goes in one side and right out the other... no bending or twisting. Results in minimum sound, contributes to low operating cost.

# WNOX



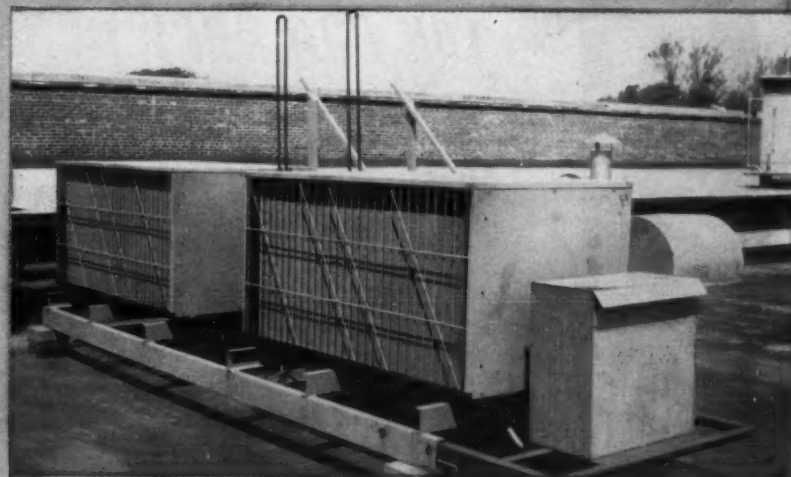
## LENNOX Industries Inc.

—Established 1895

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Calif. • Decatur, Ga. • Des Moines, Iowa.

Lennox Industries (Canada) Ltd.—Toronto, Montreal,  
Calgary and Vancouver

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Mail for Free  
Facts!



A dual rooftop installation showing intake side. Set on raised framework to allow access to built-up roof. High temperatures on roof will have little effect on cooling capacity.



Here 6 Lennox condensing units have been "stacked" to conserve space. Only straight-through air travel permits this with no danger of re-circulation. Gives better temperature control, lower cost than one large central station.

Lennox Industries Inc. Dept. AC-10  
(Address nearest division. See locations at left)

Without obligation, send me additional facts about the condensing units with Power Props.

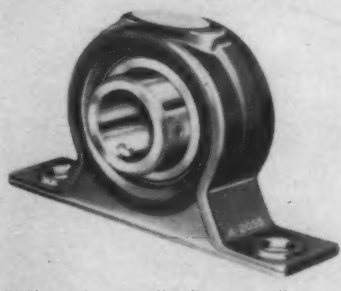
Company.....

Address.....

City.....State.....

My Name.....





## Bearing Units Offer Silent Operation

KEY NO. G-1020

AURORA, Ill.—Silent operation and smooth trouble-free operation are stressed as the features of Sealmaster Bearing Div., Stephens-Adamson Mfg. Co.'s line of zone hardened, rubber mounted bearing units.

Bearings are available in pillow block, flange, and cartridge units consisting of a ball bearing unit mounted in a synthetic oil-resistant rubber ring which fits snugly in a pressed steel housing.

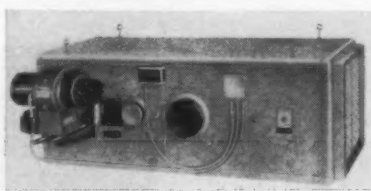
## Horizontal Oil-Fired Furnace Announced

KEY NO. G-1021

NEW YORK CITY—A new line of horizontal oil-fired winter air conditioners has been announced by American-Standard Air Conditioning Div.

Designed for installation where space limitations prevent the use of conventional heating equipment these new units are available in 84,000, 95,000, and 112,000 B.t.u. capacity at the bonnet. They can be mounted in basement, overhead in hallway, suspended under the floor in crawl space, or placed in the attic.

Compact size and the fact that they can be installed to supply either left or right air discharge



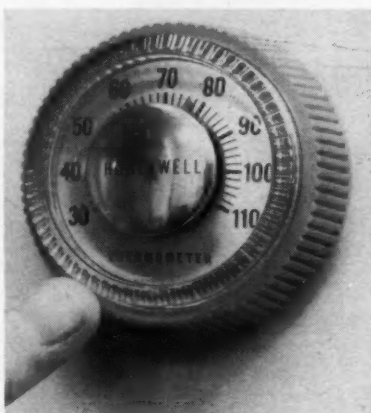
are claimed features. The furnace is shipped fully assembled, ready for installation. Standard equipment includes the factory assembled furnace package for 115 v., 60 cycle electrical operation, high temperature steel combustion chamber, wiring harness, stack control, blower and limit control, and hanger bolts.

## Introduces 4-Model Indoor Thermometer Line

KEY NO. G-1022

MINNEAPOLIS — Minneapolis-Honeywell Regulator Co. recently expanded its line of products for the home with the introduction of indoor thermometers.

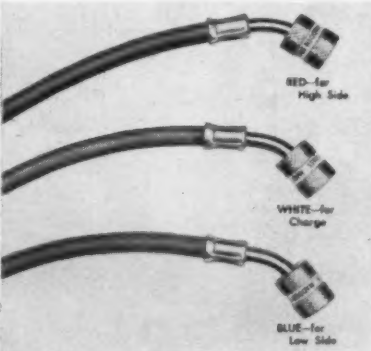
Like its "Tap-Lite" wall switch,



the company's new thermometers are said to be both functional and decorative. Included in the array are four wall-type thermometers and two designed especially for desk use.

Four wall models include the "Circlet," which is circular shaped and coral in color; the "Patrician," square and bright yellow; the "Essex," diamond shaped and pastel green; and the "Coronet," circular shaped and sandalwood in color.

Both desk models have black backgrounds. One, the "Rondelle," is a circular shaped paperweight. The second is called the "Executive" and is rectangular in shape.



## Produces Color-Coded Charging Lines

KEY NO. G-1023

AURORA, Ill.—Madden Brass Products Co. announced full production of its new color-coded charging lines.

Madden color-coded lines are in three colors: red for high side, white for charge, and blue for low side.

Color coding makes servicing easier, and simplifies work in close quarters. Line tracing is completely eliminated with Madden new color-coded charging lines, as it is always certain just where the hose is hooked up, it was pointed out.

Color-coded charging lines have flexibility, all brass barb and ferrule for positive seal.

### For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning & Refrigeration News, 450 W. Fort, Detroit 26, Mich. Only 25¢ each.

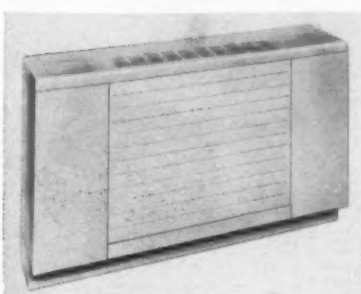
## Fan-Coil Unit Handles Both Heating, Cooling

KEY NO. G-1024

PITTSBURGH — "Capitolaire VER" fan-coil unit is the most recent hydronic heating and cooling unit to be announced by Heating & Air Conditioning Div., National-U. S. Radiator Corp.

Each fan-coil unit handles both heating and cooling, and while each unit in the building operates independently to allow the occupant to dial his own climate, all are supplied with water from central boiler and chiller units. The flexibility of sizes available permits practical section of an economical size for every application, the company said.

Units are built into a cabinet of heavy furniture steel and finished with baked-on, two-tone enamel.



They are only 9½ in. thin to allow for inconspicuous placement and to minimize the use of valuable floor space. Even the largest console models can be semi-recessed so that only 6 in. of floor space is used. Adjustable fresh air intake is furnished on each unit.

## Washers Have 6 Water Temperature Combinations

KEY NO. G-1025

CHICAGO — Pushbutton selection of six combinations of water temperatures plus a full-time lint filter, automatic pressure fill, and a newly developed and field tested washing transmission, headlines the 1958 clothes washers offered by Hotpoint Co.

New washers in six models ranging from a "Super Deluxe" lighted pushbutton to an economy model, all feature the new coaxial transmission and all porcelain finish inside and out.

Hotpoint offers two super deluxe lighted pushbutton clothes washers, model LW-45 and model LWW-45, with "Wonderinse."

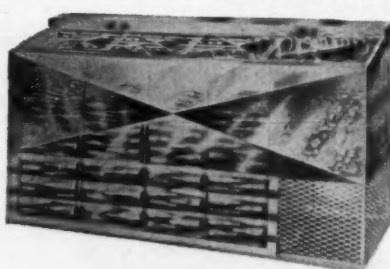
"Deluxe" line of clothes washers for 1958, model LWS-44, a special suds saver washer and LW-44, without the suds saver, have many of the super deluxe features.

New medium-priced automatic clothes washer, model LW-43, features new coaxial transmission, two-temperature washing, two-cycle dial, deep overflow rinse, jet spray rinse, automatic sediment swirl-out, and all porcelain inside and out. Economy priced model LW-40, features pushbutton washing, new coaxial transmission, jet spray rinse, deep overflow rinse, and has automatic fill.

Two Super Deluxe automatic clothes dryers, model LC-45, condenser "no vent" type and LB-45, blower type, are style matched to two super deluxe washers.

Style matched to the deluxe washers are two Deluxe clothes dryers, model LC-44, a condenser "no vent" type and LB-44, blower type. Both are automatic pushbutton dryers and feature the "toe-touch" door opener.

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DRINKMASTER  
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MENOMINEE, MICH.**

AVAILABLE IN SIZES 4 to 10 FT.

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**Products Advertised**  
(list name, page, and issue date)

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## Designs Refrigerator For Fish Storage

—KEY NO. G-1026—

FLUSHING, N. Y.—Traulsen & Co. has produced a new refrigerator specifically designed for fish storage, the manufacturing concern announced.

Now in production, model FS 8 UT, designated the "Fish File," features eight drawers, permitting quick selection of different types of fish and seafood, the company stated.

Segregation of fish products removes the time-consuming search for a particular type, it was stated. Intermingling of odors is reduced to the point where meats and other dairy products can be stored in drawers not needed for fish. Drawers are self-closing and measure 18 by 14 by 7 in., inside, in the 23.5-cu. ft. size.

It is self-defrosting and has heavy-duty coils and condenser, it was noted.

## Develops Low-Cost Solenoid Valves

—KEY NO. G-1027—

ST. LOUIS—Jacks-Evans Mfg. Co. recently announced introduction of a new low-cost line of solenoid valves for general industrial applications.



Series "J" solenoid valves are designed for the flow control of water, air, light oils, brines, low-pressure steam, industrial gas, L.P. gases, and many other non-corrosive fluids, with a maximum operating pressure differential of 150 p.s.i. They can be mounted in any position, and utilize the principle of pilot port operation. Their synthetic diaphragms are said to be unusually durable and have been successfully operated through millions of test cycles with little or no wear, it was stated.

## Ice Cream Display Case Offers Full Vision

—KEY NO. G-1028—

MT. VERNON, N. Y.—A new, full-vision, low temperature ice cream display case constructed to provide maximum product viewing and life time service, has been announced by the Evans Mfg. Corp.

Unit is designed to build profitable ice cream sales in bakeries, drug and candy stores, restaurants, supermarkets, and hotels, the firm said. Fitted with a large, full-vision Thermopane glass front panel, Evans' LTD and LTC freezer cases are constructed of heavy-gauge welded steel.

Units are exterior finished in sanitary, easy-to-clean high-gloss baked enamel.

Interiors of the units are stainless steel, it was indicated.

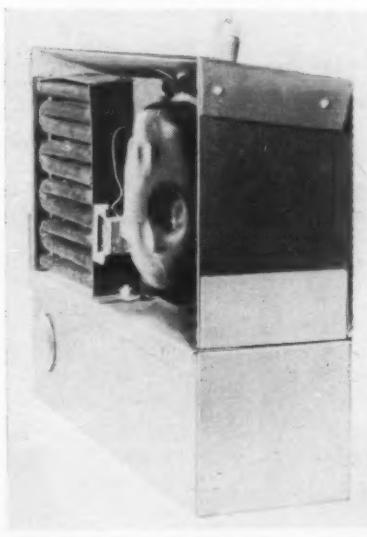
## Water Cooler Features Remote Cooling Unit

—KEY NO. G-1029—

GLEN RIDDLE, Pa.—A new, remote-type cooling unit is now available in a small size that meets all requirements for built-in water coolers. This recent addition to the Sunroc Corp. line of recessed panel coolers is model RPT-5.

Measuring only 6 3/4 in. deep, the unit also features reduced height of 21 1/2 in. for built-in-wall location, and is easily installed under cabinets, counters, etc.

This unit has a 5 g.p.h. capacity that is adequate for up to 60 persons in most office locations, and it is easily hooked up to any type of wall fountain, water station, and other dispensers used in commercial and institutional buildings. When the unit is installed inside the wall, it is available with a bar-type grille.



## Duct, Pipe Insulation Adhesive Introduced

—KEY NO. G-10210—

DETROIT—New insulation adhesives for heating and air conditioning ducts and pipes have been announced by St. Clair Rubber Co.

here.

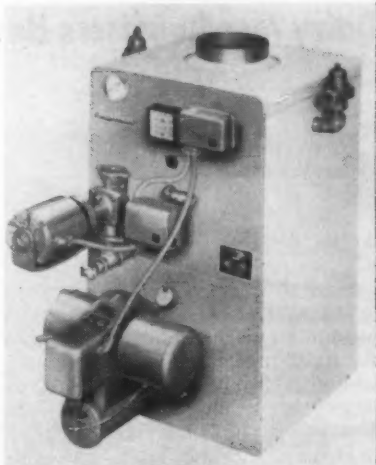
## Offers 3 Boiler Fitting Sizes

—KEY NO. G-10211—

MORTON GROVE, Ill.—Bell & Gossett Co. now offers three new boiler fitting sizes in its "Airtrol" system of controlled air in hot water heating.

Sizes are: a large 6 by 6 in. and a small 1 1/2 by 1 1/2 in. fitting for side-outlet boilers, and a new ABFS 1 1/4 by 1 1/2 in. fitting for top-outlet boilers.

By increasing the number of sizes to be had in Airtrol fittings Bell & Gossett has made possible even wider application of this device.



## Designs 5 Oil-Fired Hot Water Boilers

—KEY NO. G-10212—

CONSHOHOCKEN, Pa.—Five new "Fluid Heat" oil-fired hot water boilers designed to meet residential requirements for "wet heat" have been added to the

Fluid Heat line, John Wood Co., Heater & Tank Div.

Two of the units are rated for 580 and 720 sq. ft. for forced circulating hot water systems and are completely factory wired and assembled with burner mounted. Three of the units will be designed for 720, 995, and 1,260 sq. ft. of hot water respectively, for either forced circulating or gravity hot water systems.



Fedders capillary assemblies incorporating Anaconda restrictor tubes: Left, assembly serving the Fedders 3-hp packaged air conditioner; center, the 1-hp heat pump unit; right, the 3/4-hp casement air conditioner, illustrated.

## "We've never had to reject an inch of Anaconda Restrictor Tube"—Fedders-Quigan Corp.

As one of the largest producers of room air conditioners, Fedders-Quigan Corporation, Maspeth, Long Island, uses miles of restrictor tube a year. Since 1954, Fedders has been using Anaconda Restrictor Tube. And in that time, the company has not had to reject a single inch of it.

Fedders looks on the restrictor tube as the jugular vein of the air conditioner. The faithful performance of the entire unit depends largely on the tube's uniformity and quality. Fedders looks for these qualities in restrictor tubes:

1. Uniform performance within extremely close air-flow limits, made possible by consistently uniform inside diameter and a smooth, round, clean bore.
2. Easy bending, without fractures.

Fedders uses restrictor tube in four inside diameters in six lengths, reordering from Master Sample Reference Tubes. Duplicate Master Reference Samples kept at French Small Tube Division, The American Brass Company, insure that

all shipments have the air-flow limits originally established.

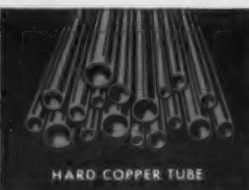
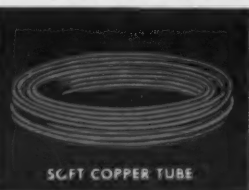
**Consistently high quality.** All Anaconda Restrictor Tubes are plug-drawn to finish. Every length is chamfered at both ends, inside and out. Each tube is thoroughly washed and dried, given a final air-flow test, carefully bundled, with ends of each bundle wrapped in paper. Anaconda Custom-Made Restrictor Tubes are made in both copper and aluminum, in nominal inside diameters from .025 to .090 inches.

Write for information or free Air-Flow Slide Rule Calculator. Address: French Small Tube Division, The American Brass Company, Box 1031, Waterbury 20, Conn.

## ANACONDA® RESTRICTOR TUBES

Made by French Small Tube Division of The American Brass Company

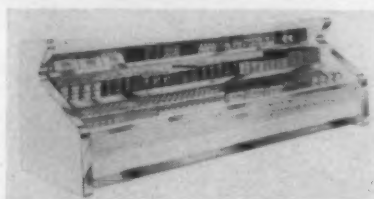
ANACONDA PRODUCTS FOR THE REFRIGERATION AND AIR-CONDITIONING INDUSTRY



For more information about products advertised on this page use Information Center, page 26.



## Dairy Merchandisers Have 3 Refrigerated Shelves



KEY NO. G-10214

MARSHALL, Mich.—Two dairy products merchandisers designed for mass merchandising and standard with three refrigerated shelves, have been introduced by the Sherer-Gillett Co.

Demand items, such as milk,

butter, and eggs are displayed on lower levels of new "5000" models while upper, brilliantly-lighted, easy-to-reach shelves expose long-profit items, such as cheeses, spreads, and delicacies.

New dairy product merchandisers are designed to be arranged in a line for a continuous, eye-catching display.

The new merchandisers come in 8 and 12-ft. lengths. Total capacity is 68.6 cu. ft. in the 12-ft. length, and 45.7 cu. ft. in the 8-ft. length. Joining kits are furnished with both sizes for continuous, mass-merchandising line-ups.

## 'Pinpoint Oiler' Gets to Hard-to-Reach Parts

KEY NO. G-10215

BROOKLYN—A device which makes it possible to lubricate extremely small or hard-to-get-to parts of machinery is now available from Diversified Trading Co.

Called the "pinpoint oiler," it was specifically designed for those

applications where the use of the conventional oilcan is impractical because of its large size. It is used for the lubrication of miniaturized components and fine instruments.

New pinpoint oiler consists of a transparent plastic cylinder to which a needle is attached.

## Portable Dishwasher Holds Dinner Service



KEY NO. G-10216

COLUMBUS, Ohio—A new portable dishwasher that holds a complete dinner service for eight people has been introduced re-

cently by Westinghouse Electric Corp.

The new mobile model is more compact than the unit it superseded. Just 22 in. wide, it is 26 in. deep and 34 in. high—low enough to be stored under most kitchen work counters. Its silent, "feather-touch" mobility is assured by ball bearing, rubber casters, the company said.

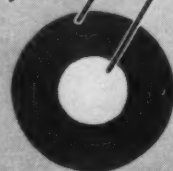
## Switches Have Double Conduit Openings

KEY NO. G-10217

FREEPORT, Ill.—A new series of explosion-proof switches that feature double conduit openings is being marketed by Micro Switch, a division of Minneapolis-Honeywell Regulator Co.

In applications that require "through" wiring, these new precision switches can reduce many installation costs, the company said.

## RESISTANCE WIRE INSULATION CASTING

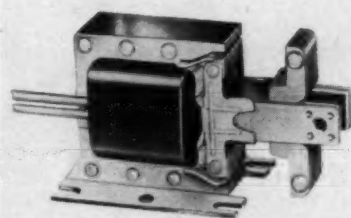


## Makes Heaters In New Way

KEY NO. G-10218

ADRIAN, Mich.—An entirely new method of construction is used in the manufacture of "Adaptatherm" electric heaters and heating units made by H. W. Tuttle & Co. It consists of embedding specially insulated resistance wire in the body of a solid casting of a heat conducting material such as aluminum alloy. The embedding material may form the body to be heated itself—or form an integral unit for heating some other body.

Special insulation around the resistance wire is a heat conductor claimed to assure rapid heat transfer and is completely flexible. Flexibility allows expansion and contracting of the resistance wire without cracking or breaking the insulation, thus eliminating "hot spots."



## Offers 'Solenoid' with 'Permaseal' Coil

KEY NO. G-10219

CHICAGO—Guardian Electric Mfg. Co. is now producing a No. 18 a.c. solenoid with a "Permaseal" coil.

Coil winding is completely encapsulated in Permaseal thermosetting epoxy. It is said to prohibit penetration by water, extreme humidity, oils, salt air, acid and alkaline solutions, ether, alcohol, hydraulics, and other fluids.

Units are available for intermittent or continuous duty operation. With 1/4 in. plunger stroke, the solenoids lift up to 11 lbs. Stroke is adjustable from 1/32 to 1 in. D.C. units are also available for 400 cycle operation.

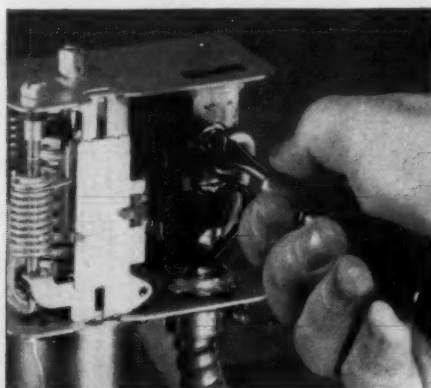
## Chemical Compound Removes Deposits

KEY NO. G-10220

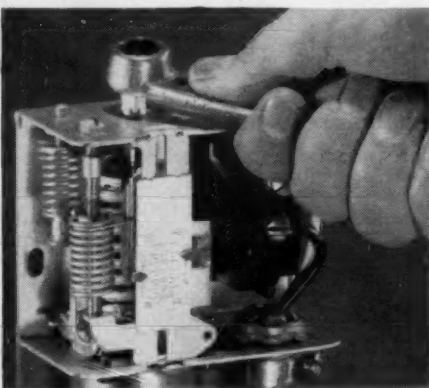
NEW YORK CITY—A recent development by Sealed Unit Parts Co., Inc. in chemical metal cleaning is said to revolutionize sealed unit rebuilding.

This new chemical compound known as "X 220" is claimed to remove all foreign deposits including rust and scale in minutes, instead of hours. Most important X 220 is claimed to remove the vaporized plastic insulation that coats the metal parts after a sealed unit burns out.

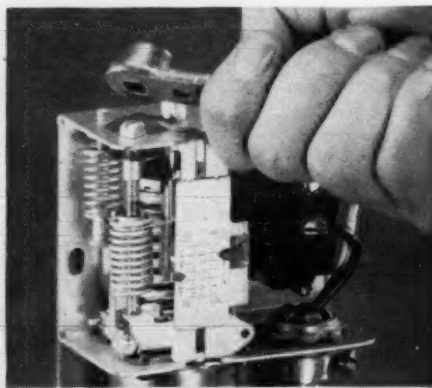
All metal parts including brass and copper fittings come out bright enough to eliminate brightening solution.



1. Mount control (bracket furnished), connect capillary, remove control cover and make 2 electrical connections (terminals are completely accessible).



2. Turn the range screw to either raise or lower the cut-in setting as required... differential does not change.



3. Turn differential screw to raise or lower cut-out setting independently of cut-in setting. This widens or narrows the differential.

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# PENN "270"

## SINGLE-POLE REFRIGERATION CONTROL



Series 270 is available in a variety of models for every refrigeration job.

## Combines simple design with PENN "Snap-flex" contact action

Installation is so simple and fast with the Series 270. And, adjustment is even simpler because of Penn's direct-reading, calibrated scale indicating cut-in and cut-out settings. Time-wasting subtraction or addition is eliminated.

Once installed, the Series 270 will perform accurately and stay-on-the-job longer. One reason is the exclusive, "Snap-flex" contact structure with

"roll-wipe-snap" action on closing and opening. There's no bounce... no closing arc... no welding of contacts.

Try the Penn Series 270... in either single or double pole... on your next job and you'll discover a big difference. Ask your wholesaler for Penn.

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EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N. Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

For more information about products advertised on this page use Information Center, page 26.



## Refrigerated Trailer Rating

### Study Shows Comparison of Highway Rating with Laboratory Rating Remarkably Consistent

WASHINGTON, D. C.—The first two trailers to be rated in the TTMA-sponsored program to develop an industry standard method of measuring heat gain in refrigerated vehicles showed similar relations between the road performance and laboratory ratings, according to P. R. Achenbach, chief of the Air Conditioning & Refrigeration Section of the National Bureau of Standards.

A Steering Committee named to advise the NBS held its second meeting recently in Washington, D. C. In reporting to the project's Steering Committee, Chairman Achenbach stated that if the heat transfer measured in the laboratory was taken as 100, the heat transfer measured operating at 50 m.p.h. on the Ohio Turnpike was between 120 and 130, based on a spot sampling of the road data. While the cooling loads of the two trailers were different, the ratio of laboratory rating and highway rating was remarkably consistent.

#### Moisture Accumulation Varies In 2 Trucks

It was noted that one trailer showed a somewhat greater accumulation of moisture than the other and the one with the greatest weight increase due to moisture gain also showed the greatest heat transfer, both in laboratory and road tests. However, not all of the difference in cooling load between the two specimens can be accounted for by the difference in moisture gain.

The trailers gained roughly from a half pound to one pound of moisture per hour during the laboratory test and showed a total gain of approximately 150 to 250 lbs. during the road test. It was reasoned that air infiltration into the insulated cavity was the principal source of moisture gain since diffusion was found to be a nearly negligible factor.

#### Diffusion Defined

Diffusion was defined as the molecular movement of moisture from zones of higher concentration to zones of lower concentration under the influence of a difference in vapor pressure, while air infiltration was described as moisture-laden air passing through the trailer structure.

Air infiltration test results reported in a previous release indicated that the principal source of air leakage is the nose of the trailer, since the pressure differential between the nose and the interior at 50 m.p.h. was found to be approximately 1.25 in. water column.

In the course of the first road test the special White tractor and the Fruehauf trailer were operated approximately 2,500 miles while under test. The second road test was made with a Trailmobile trailer and the combination covered about 5,000 miles in test operation.

"As a result of these tests it has been possible, for the first time, to obtain rather precise

information about the effect of road speed on the temperature at various points surrounding the trailer," the report stated.

"For example, on a clear day the roof temperature was observed to be 103°, while the ambient was 75° when the trailer was standing still. At 50 m.p.h. the roof temperature dropped to about 80°, or only 5° above the surrounding air temperature.

"Another interesting phenomenon was the observed temperature under the trailer. While operating over the road the temperature on the underside of the trailer floor was 15

to 18° above ambient but, when standing with the tractor motor stopped, the temperature under the floor dropped to ambient.

"The above was observed to be true both at night and during the day and was even true at night during a rainstorm. Obviously, reflected heat from the road did not account for this temperature rise.

"This observed phenomenon may be of significance in relation to the need for floor insulation. Generally the temperatures under the floor were as high or higher than those observed on the roof when the trailer was moving at 50 m.p.h.,

whether the sun was shining or not. The higher temperature

under the trailer was thought to be caused by the discharge of engine heat under the trailer."

The chairman told the committee that the bureau would prepare a progress report covering the work done during the first three months of the program. Copies will go to the sponsoring government agencies and all non-proprietary information will in turn be released to interested industry mem-

bers.

The committee inspected all the vehicles used to-date in the test program (including a used trailer furnished by Emery Transportation Co., which has been rated in the laboratory and is to be the next trailer to go out on a road test).

Consideration is being given to finding a new location for road tests in order to insure higher average daily temperatures than are currently available on the Ohio Turnpike.

## Kirkpatrick Joins American Mfg. Co.

MONTGOMERY, Ala. — Appointment of Henry O. Kirkpatrick as general manager of American Mfg. Co., Div. of Standard Forge & Axle Co. here has been announced. The firm makes transport refrigeration and air conditioning equipment.

Kirkpatrick founded Cold-

mobile Co. in Detroit in 1948 and served as head of the firm until 1951 when it became a division of Union Asbestos & Rubber Co., Chicago.

Since then he has been division manager and later vice president-refrigeration of Hunter Mfg. Co., Solon, Ohio.



Scale removal  
simplified with  
**acid  
cleaners**

in easy-to-handle **dry** form

Cleaners based on Du Pont Sulfamic Acid are safer, more convenient, non-fuming . . . dissolve in water to form effective, low-corrosive solutions

Now . . . powerful acid cleaners you handle *dry* with no hazardous fumes, no acid splashing! When added to water, these cleaners form solutions equal to hydrochloric acid in penetrating power, yet they're far less corrosive. The key

to these unusual properties is Du Pont Sulfamic Acid.

Cleaners based on sulfamic acid cut downtime to a minimum during scale removal. In many situations, because there are no fumes, cleaning can be

done with no interference to normal operations. And, because these cleaners are easier to handle and store, their use results in lower labor and storage costs.

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## Chest Type Freezers Round Out Quicfrez Line; Adds 14.5, 17.5, 20.5-Cu. Ft. Sizes

FOND DU LAC, Wis.—The first models of a new line of Quicfrez chest type freezers are now coming off the production line, according to Quicfrez, Inc., with full production planned for the late fall months.

This new line includes models in the 14.5, 17.5, and 20.5-cu. ft. sizes.

"While Quicfrez was a pioneer in the manufacturing of chest type freezers in the late 1930's, production was curtailed after a disastrous fire in favor of manufacturing refrigerators and upright freezers," it was pointed out. "Now, with production resumed on chest type freezers, Quicfrez offers a complete line of home type refrigerators and freezers."

The new chest freezers are "high-fashion" styled with golden mist interior, copper trim, and an interchangeable color panel on the front. Flexible frozen food storage is provided with baskets, dividers, and a 3.3-cu. ft. "Quicfrez" compartment.

Other features include a safety, counterbalanced lid; automatic interior light; built-in key lock, warning light to indicate safe operating condition. A heavy rubber balloon gasket on lid provides positive seal and a rubber cabinet collar provides

### G-E Distribution

## Major Appliances, TV Receiver Report Relationship Changed

NEW YORK CITY—General Electric Co. has instituted two changes in reporting relationships within its company-owned distribution organization for major appliances and television receivers.

The company components involved are the Hotpoint Appliance Sales Co. (Hasco) and the General Electric Supply Co.'s (Gesco) Appliance & Television Receiver Dept.

Hasco, currently attached to Gesco in Bridgeport, will report directly to the Hotpoint Co. Div. in Chicago, according to Roy W. Johnson, General Electric executive vice president in charge of the firm's consumer products.

Gesco's Appliance & Television Receiver Dept., which currently reports to Gesco, Bridgeport, will report to General Electric's Appliance & Television Receiver Div. in Louisville.

"These changes will enable Gesco to concentrate on handling the complete line of General Electric housewares and electrical apparatus and supplies," Johnson said.

"They are also another step in the General Electric program to closely integrate company-owned field distribution of major appliances with product departments," he added.

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Product Knowledge, Protective Maintenance, Trouble-Shooting, Adjustment, Repair of Electric Motors.

Only 40¢ each.

For your copy, clip this ad and mail with name and address to: Air Conditioning & Refrigeration News, 450 W. Fort, Detroit 26, Mich.



"HIGH-FASHION" styled new Quicfrez, Inc. chest-type home freezers come in 14.5, 17.5, and 20.5-cu. ft. sizes with golden mist interior, copper trim, and interchangeable color panel on the front.

a wide loading surface, it was stated.

Models are designated Q145H, Q175H, and Q205H.

## New Orleans Dealers Sell 900 Freezers In 3-Mo. Push

NEW ORLEANS—Nine hundred freezers were sold during a three-months-long "Food Freezer Frees Her" campaign last summer sponsored by the New Orleans Public Service Inc. here, E. W. Avegno, general sales manager for the utility, reported recently.

This compared with 685 freezers sold during a similar campaign in 1956. "We are well pleased with the results," he declared.

Though satisfaction was guaranteed, only one freezer was returned during the contest, which ran from June 18 to Sept. 14, Avegno said.

Retailers and distributors co-operated with the utility in promoting freezers heavily during those months, using all types of media.

## Freezer-Turned-Display Case Ups Tackle Sales In Wyo. 'Biggest Fish' Contest

CHEYENNE, Wyo.—A big help in insuring the success of an annual "biggest fish" fishing contest is a home freezer converted to a display case, according to Joe Goldstein, owner of Hub Sporting Goods Co. here.

For more than six years, Goldstein has stimulated his fishing tackle turnover by a contest which covers the entire fishing season, offering prizes each week through the length of the competition and a grand prize at the end of the season.

Instead of merely "telling the contestants about it," Goldstein converted a small home freezer, one of the early models with a limited amount of storage space, into a "display box" set in the center of the store. Each week, the prize winner from the past

week is on display—huge, colorful trout which get an envious reaction from store visitors.

"Describing the weekly prize winner in terms of words is one thing and showing the actual fish is another," Goldstein grinned. "When a fishing tackle customer sees a top notch catch on display and gets the exact detail as to where and how it was caught, we invariably get better results."

Two transparent covers on the display refrigerator, one clear plastic and one glass spaced an inch apart with a "dead air space" between, do away with condensation which usually obscures display of this type. The box kept at 10° temperature will preserve prize winning fish indefinitely.

## Bundyweld serpentine coils—bent 10



Bundy-designed machine puts two 180° bends in ten lengths of Bundyweld Tubing with just one clamping. Modern equipment like this keeps quality up, costs down on fabricated parts from Bundy.

SEE US AT BOOTH 545, AIR-CONDITIONING & REFRIGERATION EXPOSITION

### BUNDYWELD IS DOUBLE-WALLED FROM A SINGLE STRIP



Bundyweld starts as a single strip of copper-coated steel. Then it's . . .



continuously rolled twice around laterally into a tube of uniform thickness, and



passed through a furnace. Copper coating fuses with steel. Result . . .



Bundyweld, double-walled and brazed through 360° of wall contact.



NOTE the exclusive Bundy-developed beveled edges, which afford a smoother joint, absence of bead, and less chance for any leakage.

SIZES UP TO 1/2" O.D.



## Nets 40 Sales

## Why Play Fair? Dealer Who Doesn't Ups Sales

TRAVERSE CITY, Mich.—After years of maintaining a booth at the annual Northwest Michigan Fair and getting consistent results in appliance sales—exactly nothing, that is—Paul Garthe Refrigeration & Appliances here came up with a new approach that netted 40 sales of major appliances during fair week this year.

Instead of setting up a booth at the fairgrounds, this dealership invited fairgoers to stop in at the store for doughnuts and coffee on their way to or from the fair and try to win a free washer. More than 400 people did so, and among them 40 sales were made, according to John Delanty, sales manager.

"Nearly everyone who goes to

the fair is more interested in the exhibits, the midway, and the grandstand events than in seriously discussing appliances," Delanty believes.

"Sure, once in a while you find what appears to be a good prospect, but after talking with him a couple hours you discover he's from Cincinnati. So we may have helped some Cincinnati dealer but not ourselves," he says.

"Occasionally, too, a prospect at the fair booth is interested in a certain model that turns out to be at the store, and a prospect at the store often wants to see a particular model—which happens to be at the fair.

"Besides keeping all the models in one place, we also saved the expense of setting up and manning the booth at the fairgrounds, and avoided the damage to equipment that almost inevitably goes along with such ventures," Delanty pointed out.

## Anderson Named Norge Vice Pres.

CHICAGO—Appointment of Kenneth E. Anderson as vice president was announced by Judson S. Sayre, president of Norge Div., Borg-Warner Corp.

He is general plant manager of Norge operations at Muskegon and Muskegon Heights, Mich.

Anderson reports to V. C. Rice, vice president in charge of all Norge manufacturing and engineering. He will continue to be in charge of the refrigerator and home freezer, aircraft, and factory parts service plants.

Anderson has been associated with Norge for the past 22 years.



K. E. Anderson

## NEMA Reports Distributor Percentages

## Calif. Tops In Freezer, Second In Refrigerator Sales In First Half

NEW YORK CITY—First in percentage of distributor sales to dealers in freezers and a close second in refrigerators was California's record for the first six months of this year, according to the National Electrical Manufacturers Association.

California had a total percentage of all distributor sales of freezers of 6.138 as compared with second-slot Texas' 5.888% and Illinois' third position of 4.860%, NEMA reported.

Refrigerator sales by distributors for the first half were topped by New York with 11.011% of the whole, California closing fast with 10.170, quite a leap over Pennsylvania's third post percentage of 6.398.

Based on distributors' sales to dealers, as reported to the NEMA statistical department, here are the percentages:

States	Refrigerators Per cent	Freezers Per cent
Alabama	1.565	3.065
Arizona	.669	.922
Arkansas	.823	1.498
California	10.170	6.138
Colorado	.838	.888
Connecticut	1.392	.719
Delaware	.247	.223
District of Columbia	.972	1.291
Florida	3.993	2.791
Georgia	2.148	4.038
Idaho	.242	.562
Illinois	6.314	4.860
Indiana	3.043	3.056
Iowa	1.209	2.162
Kansas	.947	1.022
Kentucky	1.591	2.373
Louisiana	1.906	3.331
Maine	.525	.480
Maryland	1.477	1.249
Massachusetts	2.769	.912
Michigan	5.341	3.997
Minnesota	1.477	2.324
Mississippi	.880	1.957
Missouri	2.601	3.541
Montana	.258	.359
Nebraska	.621	.900
Nevada	.126	.108
New Hampshire	.297	.131
New Jersey	3.231	2.122
New Mexico	.323	.620
New York	11.011	4.558
North Carolina	1.917	3.796
North Dakota	.205	.658
Ohio	5.544	4.856
Oklahoma	1.133	1.028
Oregon	.769	1.492
Pennsylvania	6.398	5.077
Rhode Island	.451	.087
South Carolina	.968	1.915
South Dakota	.226	.510
Tennessee	1.564	3.654
Texas	5.134	5.888
Utah	.406	.323
Vermont	.177	.188
Virginia	1.705	2.365
Washington	1.339	2.315
West Virginia	1.053	1.212
Wisconsin	1.902	2.330
Wyoming	.103	.109
Total United States	100.000	100.000

## at a time on high-speed machines

You get mass-production savings . . . precise, uniform bends, when your serpentine coils are made on Bundy's special machines

When you order serpentine coils for evaporators and condensers, you expect from the fabricator: *speed*—to hold down your costs . . . give you on-time deliveries; *precision*—to meet your specifications exactly; *uniformity*—to maintain your high-quality standards. You get all these—and more—in serpentine coils from Bundy. Here's why:

**Fabrication machinery and fixtures** are designed by Bundy engineers . . . operated by Bundy-trained technicians. They bend or coil tubing into components for *all* types of refrigeration applications. Finished parts are prepackaged and delivered on time, to keep your production on schedule.

**Design and engineering help** is yours without charge at any stage in the development of your product, from conception to production. Bundy's staff is noted for practical solutions to tough problems.

**Leakproof Bundyweld® Tubing**, the safety standard of the refrigeration industry, assures you of long-lasting, dependable performance. Made by the exclusive process shown below, left, Bundyweld has high tensile and bursting strength . . . exceptional resistance to vibration fatigue.

Next time you order tubing for evaporators, compressors, condensers or refrigerant lines, see Bundy first. Chances are you'll save time, money . . . or both. Call, write, or wire us today.



Wire-tube condenser assemblies made with prefabricated Bundyweld serpentine coils are fastened to condenser-compressor mounting brackets. Tubing is delivered clean and inspected . . . ready for final assembly operations.

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Bundy Tubing Distributors and Representatives: **Massachusetts:** Austin-Hastings Co., Inc., 226 Binney Street, Cambridge 42 • **New Jersey:** Atlantic Tube & Metals, Inc., P.O. Box 595, Mountain View • **Pennsylvania:** Rutan & Co., 1 Bala Ave., Bala-Cynwyd • **Midwest:** Lapham-Hickey Steel Corp., 3333 W. 47th Place, Chicago 32, Ill. • **South:** Pearson-Deakins Co., 823-824 Chattanooga Bank Bldg., Chattanooga 2, Tenn. • **Southwest:** Vinson Steel & Aluminum Co., 4606 Singleton Blvd., Dallas, Texas • **Northwest:** Eagle Metals Co., 4755 First Avenue South, Seattle 4, Wash. • **Far West:** Pacific Metals Co., Ltd., 2187 S. Garfield, Los Angeles 22, Calif.; Pacific Metals Co., Ltd., 1900 Third Street, San Francisco 7, Calif. Bundyweld nickel and Monel tubing are sold by distributors of nickel and nickel alloys in principal cities.

## Refrigerator Sales In First 6-Mos. Led By 12-Cu. Ft. Model

NEW YORK CITY—Biggest selling household refrigerator by far by size of unit in the first six months of this year was the 12-cu. ft. item with a total of 26.4% of sales, it was indicated by data reported to the National Electrical Manufacturers Association.

Farm and home freezers in the 9 to 14-cu. ft. class grabbed honors for the first half with 37.7% of total sales, according to the NEMA report.

## TOTAL SALES OF ELECTRIC HOUSEHOLD REFRIGERATORS AND ELECTRIC FARM AND HOME FREEZERS—DISTRIBUTION BY SIZE OF UNIT

	First 6 Mos., 1957
<b>REFRIGERATORS</b>	
7 cu. ft. and under	1.7
8 cu. ft.	18.4
9 cu. ft.	4.4
10 cu. ft.	14.7
11 cu. ft.	15.9
12 cu. ft.	26.4
13 cu. ft. and over	18.5
Total	100.0
<b>FREEZERS*</b>	
8 cu. ft. and under	3.9
9-14 cu. ft.	37.7
15-17 cu. ft.	27.5
18-19 cu. ft.	13.7
20 cu. ft. and over	17.2
Total	100.0

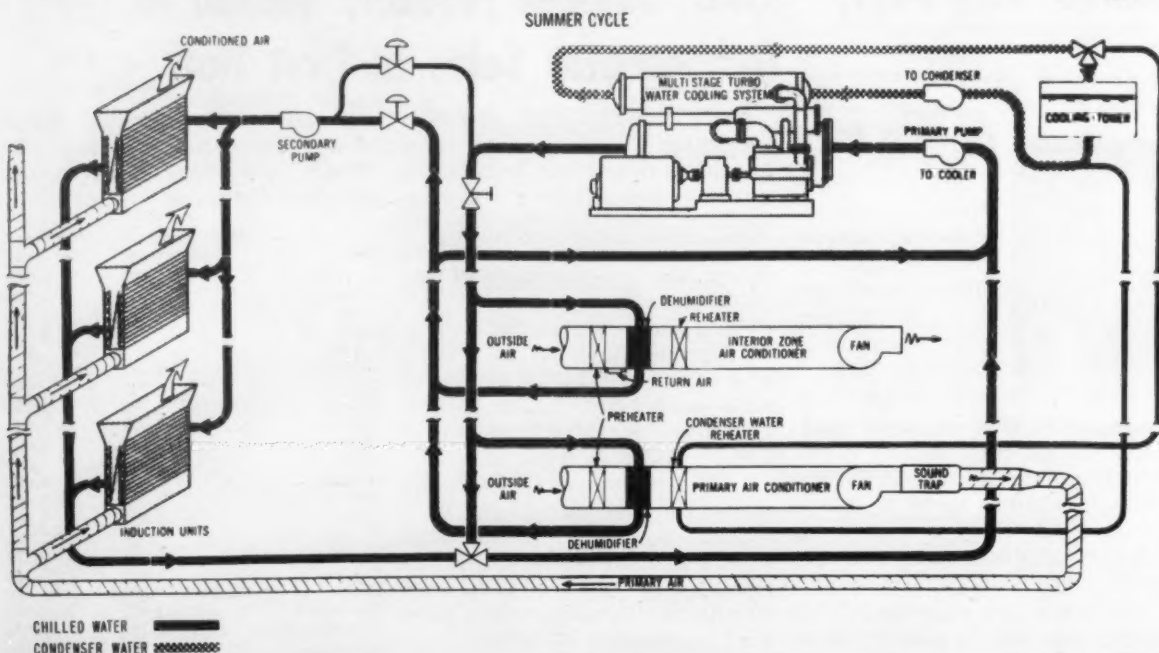
\*Includes 46.1% for chest and 53.9% for upright models.

## For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning & Refrigeration News, 450 W. Fort, Detroit 26, Mich. Only 25¢ each.

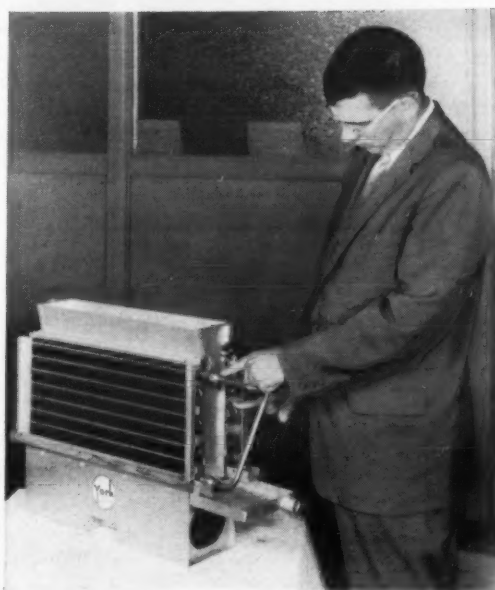


# Induction Conditioning Unit Needs No Changeover from Chilled to Hot Water



LEFT: During summer cycle York Corp.'s new air conditioning system operates like a conventional induction system with the exception that this system is designed to use smaller primary air equipment, lower central fan horsepower, and smaller air supply ducts.

RIGHT: New room unit which forms integral part of York induction air conditioning system features two single row coils mounted in front and in back of a continuous primary air slot. This unit meets specifications for unusually high secondary coil capacities using minimum c.f.m. of primary air, the company says.



YORK, Pa.—A new system of induction air conditioning "which will represent substantial savings to building operators in initial costs, installation, and operation" has been developed by York Corp., subsidiary of Borg-Warner, it was announced by Henry M. Haase, president.

## 'HIGH SECONDARY COIL CAPACITY'

Haase said that the system features a patented high-capacity, double coil room unit with claimed higher secondary coil capacity than any other unit using a filter.

First installation of the new system will be in the new Uris Brothers office building at 2 Broadway, New York City.

"An unusual feature of the new system concerns the changeover point when outside temperatures require peripheral heating rather than cooling," it was stated. "In conventional induction air conditioning systems, the changeover from chilled to hot water takes place at a relatively high (40 to 50° F.) outside temperature. In York's new system, there need be no changeover from chilled to hot water.

"Initial cost savings to building owners result from the use of smaller primary air pre-heaters, dehumidifiers, reheaters, and central fans as well as smaller primary air ducts than are used in conventional systems.

## 'NEEDS LESS RIGGING'

"Installation costs are cut by the need for less rigging and assembly time due to the use of smaller equipment; easier make-up of spiral tubing ducts which are correctly pre-sized for this specific type installation, and elimination of welding, soldering, or fasteners to connect ductwork through use of a synthetic-rubber base sealer.

"Also, the ductwork, being smaller than that used in conventional induction systems, can be furred into standard building columns, with a commensurate saving in column construction cost and floor space."

Operational savings on the new system are also said to be considerable.

"In both summer and winter, lower horsepower is required to run the central fans," the announcement said. "In summer, the smaller primary air requirements due to the greater secondary coil capacity means less cen-

tral station refrigeration capacity is required.

"During the heating season, hot condensing water is used to supplement normal steam heating of primary air. This is effected by having the condenser water by-pass the cooling tower when the outside temperature reaches approximately 45° F. The condenser water is then diverted to the primary air reheater where the primary air is heated to the desired temperature. Possible savings of as much as 2 B.t.u. of primary air heat for every B.t.u. extracted from the secondary air are thereby made possible.

## 'FREE-COOLED WATER IN DEHUMIDIFIER'

"At the same time, water returned from the units passes through the dehumidifier coils prior to reaching the cooler and cold outside air blown over these coils provides "free cooling" of this water. This reduces the water chilling requirements of the central station equipment.

"As an illustration, cold water entering the room units is warmed by return air. The primary and interior zone air conditioners partially cool this water and the cooler is merely required to lower it a few degrees for recirculation to the room units. Simultaneously, the heat imparted by return water in the dehumidifier coils to the entering outside air, reduces air reheat requirements."

The new heating and cooling system, according to York, is especially suitable to multi-story, multi-room buildings with long perimeters, narrow floor plans, and maximum windows.

"Heating bills with the system should be as much as 15 to 20% lower than uncontrolled radiator systems and maintenance of the units requires only replacement of the filters when necessary," it was stated. "The units have no moving parts."

The room units for the system are available in a variety of sizes and styles. Models come in either 12-in. (floor-mounted) or 20-in. (wall hung) heights with coil lengths of 20 in., 28 in., 36 in., or 48 in.

To enable architects to lay out floor plans with greater design freedom, either decorative casings with raceway covers, end and center supports, panels, wall brackets, and shelving or furred-in enclosures are included in the line.



## "Original capacity regained through CALGON® SCALE REMOVER... MICROMET PLATES keep it that way"

Hubert Nelson, President, Nelson, Phillips Company, Inc., Millburn, New Jersey

When the air conditioning equipment at the Paper Mill Playhouse near Millburn, New Jersey began to function poorly, the Nelson, Phillips Company, Water Conditioning Specialists, was called in.

They found that the two 25-ton evaporative condensers had become badly fouled with lime scale and sludge. Mr. Nelson stated, "After treatment with Calgon Scale Remover, the equipment regained its original capacity. Continuous treatment with Micromet® Plates was used to keep it that way. At the end of the summer, the coil was found to be as clean and free from scale as when the preventive treatment was started. Micromet Plates have really done their job." Mr. Nelson's comments are typical of those from the many satisfied users of Calgon's Big 3.

**Calgon Scale Remover** makes it easy to clean up a system completely. Excellent corrosion inhibitor protects system while in use. Special built-in pH color indicator shows how much scale remover to use, shows when more must be added and helps tell when system is clean.

**Micromet Plates** provide continuous treatment to inhibit further scale formation. A single

charge will last about six months, and the inexpensive feeding bag is easily and quickly installed. You merely hang the bags in the water spray.

**Calgon Algacide** controls slime and algae growths. Comes in pellet form for convenient handling. Positive action kills the growth. Periodic addition keeps equipment operating efficiently.



SEE YOUR  
REFRIGERATION WHOLESALER  
FOR CALGON'S BIG THREE!

## CALGON COMPANY



A DIVISION OF HAGAN CHEMICALS & CONTROLS, INC.  
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DIVISIONS: CALGON COMPANY, HALL LABORATORIES



## Imperial Brass Opens Completely Integrated Tube Fitting, Tube Tool Manufacturing Plant

CHICAGO—A completely integrated tube fitting and tubing tool manufacturing facility has been placed into operation at suburban Niles, Ill. by The Imperial Brass Mfg. Co.

The new face brick and glazed tile structure will house the company's executive and sales offices as well as all of its manufacturing facilities.

F. C. Shafer, president of Imperial, announced that the move into the Niles plant will be completed by Oct. 30.

Established in 1905, the company has grown through the years, expanding its divisions in separate plant sites on Chicago's near west side.

### WIDE VARIETY OF INDUSTRIES SERVED

The company manufactures items for a wide range of industries — namely transportation, refrigeration, air conditioning, instrumentation, chemical, hydraulic, plumbing, etc.

The products are manufactured from brass, aluminum, steel, stainless steel, and plastics and include tube fittings, special valves, tube working tools, and engineered products kindred to the problem of the conduction of oil, gases, chemicals, air, and water.

"In its history, the company and its engineering-research staffs have developed many outstanding contributions to the industries it serves," the announcement noted. "The latest is the new Imperial 'Hi-Seal' tube fitting which withstands high pressures and offers the important advantage of making a butt joint with no tube entry into body of fitting.

### IN NEW PLANT 90 DAYS AHEAD OF SCHEDULE

"This new Hi-Seal fitting, introduced only recently, has taxed manufacturing facilities for the company and was one of the reasons for the rush into the new plant—90 days ahead of schedule.

"From the steel chip wearing surfaces of the company's main aisles in its manufacturing section, to the insulated roof slabs, the new facility takes advantage of the latest materials and equipment available in plant design."

Containing a total of over six acres under roof, the structure has an exterior surface of buff colored face brick, with interior wall surfaces of multi-colored glazed tile.

Manufacturing facilities have been engineered to provide for continual feed-in and progressive flow in manufacturing steps to assure optimum utilization of

equipment and personnel, the company said. Some 235,000 sq. ft. of space is being used for the manufacturing inspection, packaging, and shipping operations.

In the 6,400-sq. ft. cafeteria and kitchen area, "care has been taken to provide the most sanitary, yet comfortable, surroundings possible," it was pointed out. "Completely new stainless steel kitchen facilities have been installed. The ceiling is of acoustical tile with fluorescent flush mounted lighting fixtures. Cafeteria tables are Formica covered, with upholstered chairs.

Modern locker and washroom facilities and a separate ladies lounge have been provided.

Main offices of the plant will center around a 40 by 20-ft.

glass paneled front reception room. Display cabinets, showing the range of Imperial products, have been designed into the marble and teakwood paneled wall structure. Separate tabulating, engineering, and personnel departments have been installed as part of the executive office groupings, with office space taking 27,200 sq. ft. of the plant area.

The new plant was built in two stages. The first was completed late in 1956, when an organized shifting of the facilities and staffs of the production divisions got under way.

Stage two, which completed the remainder of the plant facilities as well as the office areas, has just been completed and

movement of personnel and of all our offices late in October, equipment is now under way. we will have combined our various divisions under one roof, range planning have materially and changed over production aided our entire move," President Shafer announced. "When the new integrated lines without we have completed the transfer a single lost day of production."



**ELECTRONIC HOME AIR PURIFIER**  
The Revolutionary **Germitrol®**  
Ultra-violet Energy **Germitrol®** Germicidal Lamp Unit  
Kills AIRBORNE Germs and Viruses . . .  
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Stainless Steel — Will return many times its cost in the PROFITS of HEALTH

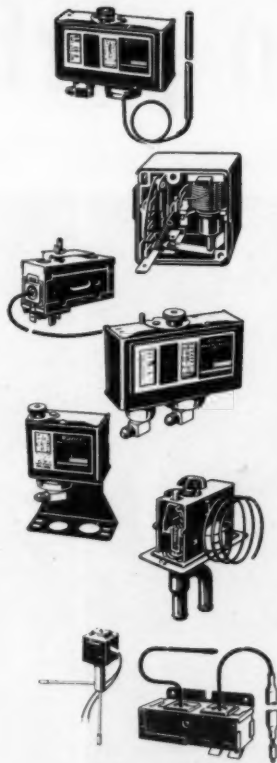
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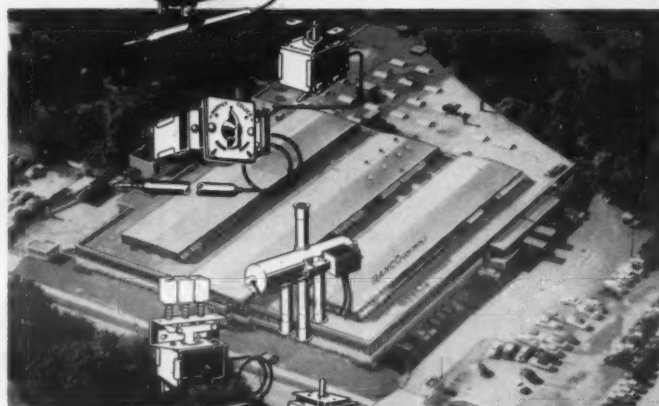
We promise you one of the largest and most interesting exhibits of refrigeration, air conditioning and appliance controls you've ever seen. We'll show you examples of Ranco Controls that apply specifically to your own equipment. And we'll have experts on hand to intelligently discuss your own control problems.

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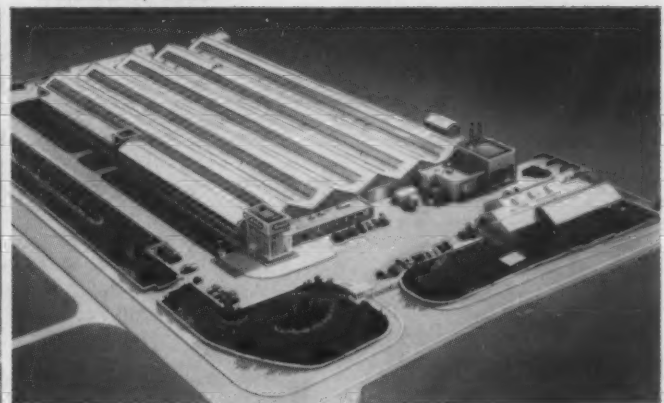
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For more information about products advertised on this page use Information Center, page 26.



# See West Coast Cooling Design Conditions as Different

## Experts Say Other Type Units Needed Than Those Used In Midwest and East

SAN FRANCISCO—Air conditioning equipment for the west coast markets must meet entirely different design conditions from those found in the middle western or eastern markets, two speakers emphasized at the summer convention of the National Warm Air Heating & Air Conditioning Association.

Stanley F. Skafte, director of engineering for the Utility Appliance Corp., Los Angeles, described what was required for southern California and the southwest.

Albert Freeman, secretary-treasurer of Western Engineers, Inc. of Portland, Ore., told about design problems and application techniques in the Pacific northwest.

### Freeman --

### 'Northwest Has Low Wet Bulb Conditions'

"Design temperatures," Freeman explained, "in the Pacific northwest range anywhere from -15° F. for heating to 110° F. for cooling. We have to admit that most of the area has plenty of rainfall — something like Texas received earlier this year — and we keep the countryside nice and green.

### 'Classed as Arid'

"Yet, during the summer cooling season, we can best class ourselves as an arid climate. No, this isn't a desert arid climate, but one with relatively low wet-bulb design conditions, ranging from 65 to 68° F., which require a little different treatment.

"Under these conditions," Freeman went on, "unless there are large internal heat loads, such as in theaters and so on, we find that the air requirements of the equipment you use are always on the maximum side of manufacturers' ratings. More often than not we need 500 c.f.m. plus per ton of equipment.

### 'Need Higher C.F.M. Units'

"This is probably the major factor in causing contractor difficulty in the northwest," he emphasized. "If standard package equipment is used, where lower c.f.m. per ton (in a 400 or 350 range) is used, then the space will receive air 4-5° F. lower than will be experienced with the larger c.f.m. operation. This, of course, can get you in lots of trouble. It will generate drafts and make your duct and distribution system very difficult to use.

"In many instances," Freeman said, "on new design we find the furnace size must be increased one to two sizes larger than required for heating, in order to give adequate air supply. You can readily understand what often happens to existing installations, to which you try to adapt an air conditioning system using cooling," he advised.

"Many manufacturers and engineers now recognize a storage or live factor in a residence, due to its construction, its use, and the daily temperature variations.

"When equipment selection for homes is made, with this reduction due to the line condition, much better and even performance of the system is found," he maintained.

### 'Air Conditioning Education Hard'

Trying to educate people that air conditioning is not a constant 70° F., but a variable

"If we could break all the little thermostats that come on thermostats, we would be very happy. By reducing the size of residential air conditioning equipment, we can establish better c.f.m.-per-ton relationships," Freeman declared.

"A word of caution is due here. Read all the notes on the fine print on the estimate sheet, and be sure you understand the reductions. But be sure to figure all the heat gains.

"Commercial applications and some residences with large glass areas do not fit into this storage-type application, but rather have to be worked on the instantaneous peak period method," he warned.

"Many dealers and contractors want to estimate this type of application by square foot per ton. This always gives me the

creeps, because this is extremely hazardous.

"Many manufacturers put out little tables and say, 'With a dress shop we can give so many square feet per ton—a jewelry shop takes more,' but there are more variations than you can shake a stick at," he insisted.

"We insist ourselves on a complete survey and consideration of all the internal loads for the final proposal.

### 'Commercial Bldgs. May Need Cooling Even at 60-70°'

"Many commercial buildings (particularly with internal heat loads) require operation of the air conditioning equipment when outdoor conditions are in the sixties. This probably doesn't sound practical to many of you.

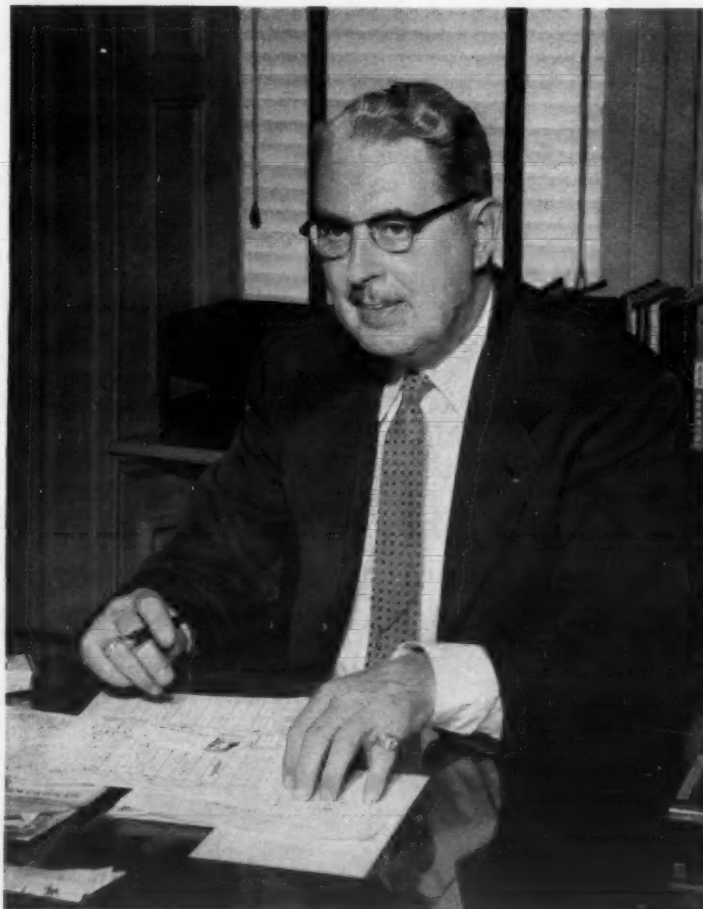
"If the application is one where people coming in from the street find that temperatures in the inside must be held between 70-72° in the large job, this is handled nicely by capacity reduction of the compressor equipment.

"But this is not generally available in smaller equipment. So multiple units are made a part of the installation. Greater care in duct design must be taken when operating at these low-temperature levels, and again the large air quantity that is being used will aggravate your distribution system," Freeman cautioned.

"We have found that dealers and contractors have a great acceptance of perimeter duct systems for residential and many commercial applications, and

(Continued on next page)

## Electro-Klean performance.....

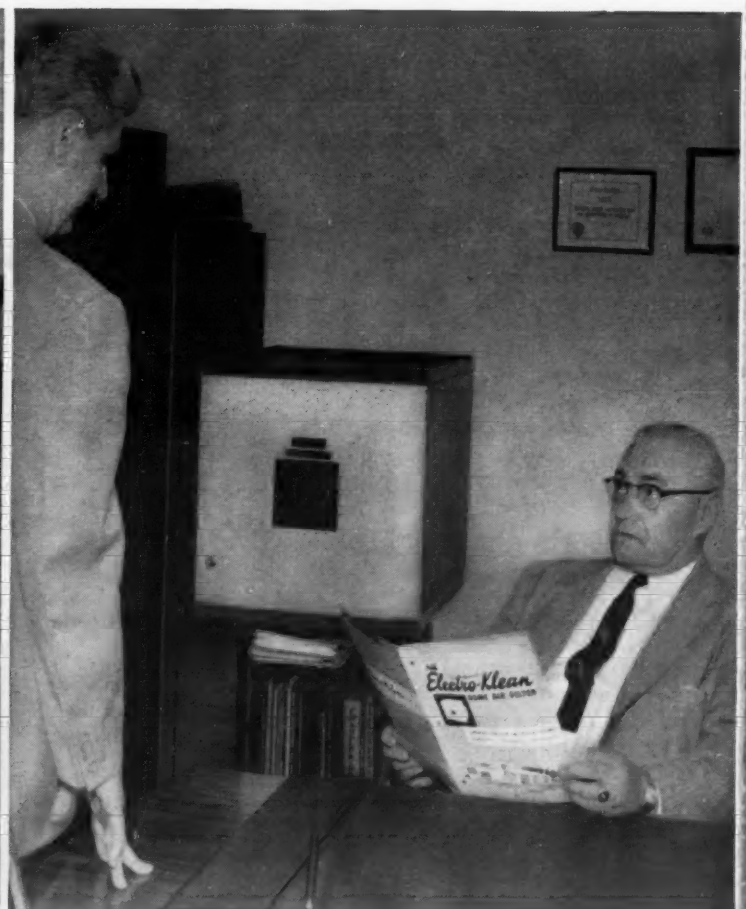


### Distributor Bryant-Williams praises Company Performance

"When AAF showed us its new product—*Electro-Klean* Electronic Home Air Filter—and a complete plan for opening the Pittsburgh market, we were interested. But we also wanted to be shown. Would the company follow through with every phase of its proposed campaign? Well, listen to this.

"From kickoff dealer meetings to large-scale color newspaper advertising and the full-time services of a top publicity expert, AAF's master promotion plan was followed through to the letter! No momentary splash, this, but a lot of sound thinking backed up by concentrated action. It sure was a real pleasure to work with a company that performed 100% on its promises."

Lee Williams  
Bryant-Williams Company  
936 Ridge Avenue  
Pittsburgh 12, Pennsylvania



### Dealer D. E. Hickey praises Sales Performance

"We were impressed with *Electro-Klean's* sales features from the moment it was introduced at AAF's first dealer meeting here. We liked the ads, too, and a program that made a lot of sense. Another big point that sold us—the many ease-of-installation features. No special wiring. No water or sewer connections. No moving parts to wear out. Advancements like that make our selling job easier.

"The fact that we could realize a full profit on every sale was the clincher. *Electro-Klean's* price makes that possible.

"In fact, the sales story was so convincing I now have one in my own home!"

D. E. Hickey  
D. E. Hickey Company  
8157 Bennet Street  
Pittsburgh 21, Pennsylvania  
(Mr. Hickey is President of the Heating and Air Conditioning Contractors Assn. of Pittsburgh.)

*Built and Backed by American Air Filter Company, Inc.*

For more information about products advertised on this page use Information Center, page 26.



(Continued from preceding page) have also taken advantage of this type of application.

"You of the industry here have long ago approved the perimeter system as a good one, and we have found that the use of this same system in cooling is very adequate. Excellent results are obtained in cooling with floor grilles or baseboards or perimeter-type distribution," Freeman stated.

"Up in the northwest our room design requirements are generally lower, 72-75° F. This, in many cases, causes difficulty in air distribution. While we can find heating equipment large enough, it generally is short on air delivery for air conditioning, therefore requiring selection and lower temperature differentials.

"Cooling equipment in residences should not be oversized," Freeman advised. "Select carefully to get the best results.

Commercial equipment operation under light load and low room temperatures requires a careful analysis," he concluded.

When the meeting was opened for questions, Freeman was queried: "I would like to ask how you go about accomplishing this need for greater air and lower room temperatures in the average residential application? What have you had to do to standard equipment?"

"Well, it is a little difficult to answer except by trying to speed up fans," Freeman responded. "And when you do that, you also run the danger of noise. There is no fixed answer to that."

"How about the air conditioning equipment itself?" he was asked. "Is the answer just in speeding up the fans on standard cooling equipment?"

"Yes, I think so."

He was questioned: "The last few years we have been bothered with a lot of 4-in. pipes on the

air conditioning system. What are you going to do to speed that up?"

#### 'Use Supplementary System with Unit'

Freeman replied: "Well, perhaps the answer to that is to use a supplementary system, as has been outlined, with the large room air conditioner. If it is too small to adopt, it certainly will give you trouble if you try to use it."

"Is it possible," he was asked, "by proper air distribution, to utilize a lower volume of air by distributing properly through the room? I point to the remark that was made about the 4-in. system."

"I think they are good, because it forces the fellow who is not normally used to installing a particularly good job, to put in a good job, a good distribution job. It requires that he install enough outlets.

"Therefore, would it not be possible that instead of using more air across the evaporator, by proper distribution, to take the normal 400 c.f.m. and do a good job of cooling with it?"

Freeman answered, "Well, believe me, that isn't the only

answer. When the capacity of your machine is out of balance with your coil, we still need the extra air volume. What you are saying is partly true—we can handle the lower temperature air by proper diffusion or proper grilles."

#### Skafe--

#### 'Larger Evaporator Coils Needed In Calif.'

Skafe pointed out that temperatures in southern California, generally speaking, are quite a bit higher than those encountered throughout the middle west and east.

"For air conditioning equipment to operate with maximum performance in these areas means that we need larger evaporator coils," he remarked.

"In fact, we have tried to consider a minimum of about 400 c.f.m. per ton capacity. That

looks quite high in a lot of cases. However, in some of the installations in the Arizona area, they have gone up as high as 500 c.f.m. per ton.

"In addition, it is necessary to have larger blowers and larger coils in the condensing equipment, to be sure that you can remove the heat sufficiently well with the smaller amount of temperature differential and operate at pressures that will cause cutout."

Skafe noted that his company always insists that "the equipment be able to run continuously at a 130° F. temperature cutting out on high pressure cut-offs.

"In connection with forced air furnaces that are to be used in conjunction with air conditioning—since air flow for air conditioning is usually considerably more than that for heating, it is recommended that the use of two-speed motors or some means of two-speed operation be used in the furnace.

#### 'Use 2-Speed Operation'

"It is our feeling," he added, "that we should use two-speed operation with high speed for air conditioning the low speed for heating which, incidentally, can be easily accomplished with the use of a two-speed motor connecting the high speed side to the air conditioning system and the low speed side into the fan control of the furnace in the usual manner.

"By the use of two-speed motors, and heating and cooling, it is very easy to have automatic changeover from summer to winter. There are several manufacturers that are now manufacturing equipment that is designed to operate under these high ambient conditions."

#### '50% Installed In Existing Homes'

Skafe estimated that approximately 50% of the air conditioning units now being installed are being installed in the existing home market. It is a good place for the future of air conditioning because it is a place where you can sell quality of product, quality of your installation, and your ability to service equipment without price always governing your quotation, he said.

#### 'Loan Agencies Are Stressing Cooling'

"To give an example of how some of the financial agencies feel about air conditioning: at a recent meeting in Los Angeles an executive of one of the large savings and loan organizations stated that they would not loan money on new construction in either San Fernando or San Gabriel valleys (down in Los Angeles where we have some warm weather) unless the house

(Concluded on next page)

## tops expectations in Pittsburgh



### Mrs. Robert L. Patterson praises Product Performance

"Whoever heard of a home 'that house-cleans itself'? Both my husband and I were willing to be shown. You see, white is the dominant color theme in our home . . . but oh, what a problem to keep clean!

"Now, however, we can already notice the difference with our new *Electro-Klean* Home Air Filter. Our walls and woodwork stay clean. Draperies, too, retain their fresh, new look. Of course, there hasn't been time to see if *Electro-Klean* does everything claimed for it, but its marvelous performance so far has more than satisfied us."

Mrs. Robert L. Patterson  
612 Berkshire Drive  
Fox Chapel  
Pittsburgh,  
Pennsylvania

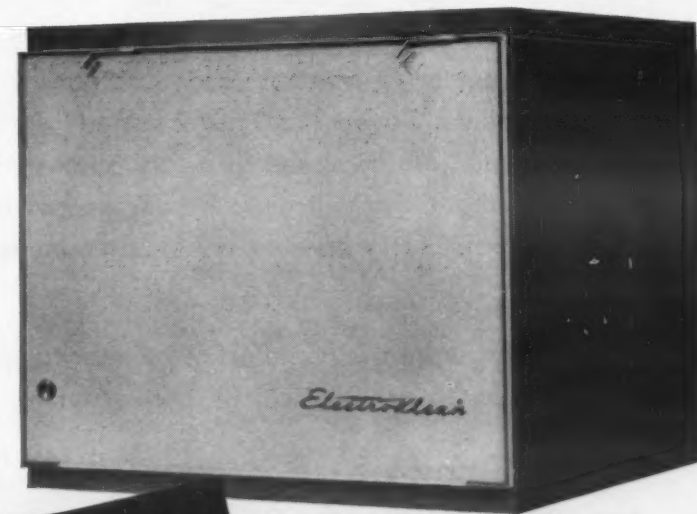
Let *Electro-Klean* Electronic Home Air Filter open a new field of profit for you. Take advantage of this new way to lift a sale out of competition. Priced at just *one-half* that of comparable units, *Electro-Klean* makes every home a prospect for electronic air filtration. No longer do you have to cut price. Instead, you take a *full* profit on every unit!

Discover what AAF performance *really* means . . . right from promotional support to a dependable product that eliminates after-service problems and complaints. Remember, every *Electro-Klean* unit is *fully* guaranteed.

See your distributor today. If he doesn't know the *new Electro-Klean* story, write: *Electro-Klean* Dept., American Air Filter Company, Inc., 109 Central Ave., Louisville 8, Ky.

### Tired of swapping dollars?

Ask your distributor about the new low-priced *Electro-Klean* . . . There's nothing like it on the market!



NEW MODEL  
NEW LOW PRICE

**Electro-Klean**  
ELECTRONIC HOME AIR FILTER

.. World's Largest Manufacturer of Electronic Air Filters

For more information about products advertised on this page use Information Center, page 26.



## Charged System Could Cut Problems--

(Concluded from preceding page)

was either air conditioned or was so equipped with the necessary ductwork and proper-sized furnace and the like that the equipment would be installed at a future date without too much additional expense," he said.

A question was asked of Skafte from the convention floor. "What is the attitude of a manufacturer like yourself towards the pitfalls—the very apparent pitfalls—that were mentioned when do-it-yourself equipment is made available to both the contractor and homeowner—which I think you and many others are doing in order to get the merchandising through the sheet metal shops with pre-charged tubing, selling to shops who don't have service departments?"

Skafte disclaimed advocacy of

do-it-yourself installations. "To me," he stated, "do-it-yourself usually is tied in with the actual consumer.

"The reason we have looked towards the use of charged tubing in connection with air conditioning equipment is that unfortunately, in putting air conditioning equipment on the market for sale, we found that there was actually a lack of qualified personnel—a real lack of people that had the ability to make residential air conditioning installations.

### 'Mfrs. Carefulness Can Be Blown Up'

"It was our feeling that, by using a charged system, we could reduce a lot of the problems that can occur by the system being charged in the field.

"Actually, all the care in the

world by the manufacturers, from the standpoint of dehydration, cleanliness, and the like, can all be blown up in two or three minutes by a job improperly handled in the field. That is the reason we go for the charged system."

Another query (really a challenge) was tossed at him. "I question that, what you are saying there, knowing that certain other equipment (makers) did not even recommend dehydrating when used to blow it out with a full charge. To my knowledge they never have had any tremendous trouble due to moisture in the lines.

"But I think that was just something incidental. You are contradicting yourself when you said you became aware of the fact that there were not qualified installers and this is an exacting field.

"Air conditioning is not like heating to a very great extent,

especially in the application of the equipment. Here you are making refrigeration equipment available to contractors who are not qualified to put it in."

Skafte replied, "Actually it was our feeling that maybe the reason that we were interested in using charged equipment was the fact that, let's say, we were new to it. We have only been in the air conditioning business three years now, and felt that we would rather be safe.

"However, in the sale of air conditioning equipment, as it had been done and is still being done, there were franchise dealers who were well qualified with no questions.

### 'Franchised Dealers Well Qualified'

"However, they, in all cases, were set up with at least one manufacturer that had been in the air conditioning business for a long time, and in most cases

were reluctant to take on any additional equipment.

"Therefore," Skafte defended himself, "for those of us getting into the air conditioning business at a later date, it was necessary to rely on installers that possibly were not as highly qualified, although we have been doing our very best to bring them up through field training to a level that we feel is satisfactory from the installation standpoint, especially with the use of charged tube."

## 100 Heat Pumps In Washington, D. C. Area

WASHINGTON, D. C. — At the present time, 100 heat pumps are operating in the Washington, D. C. area (including northern Virginia). Public acceptance has been such that 56 more units are in the process of being installed, the Electric Institute of Washington announced recently.

The largest single installation, using 16 5-ton units, will be installed on the roof of a commercial building.

The Potomac Electric Power Co. reports that it has 29 residential heat pumps and 46 commercial heat pumps on its lines.

The institute's records also showed that for the first eight months of 1957, 22,353 room air conditioners of 1 hp. and under were installed in the area, bringing the total installations to date to 139,373 units.

During the same portion of this year 3,325 dehumidifiers were also sold. Total sold now is 27,323.

J. P. Schaefer, manager of the utility's commercial customer division reported that 9,688 hp. of air conditioning equipment was installed in commercial establishments and apartments on PEPCO lines during the first nine months.

During the same period, 14,854 hp. of air conditioning was installed in government buildings on the utility's lines.

Grand total of air conditioning installed in commercial buildings and apartments has reached 165,708 hp. Total for government buildings is 127,074.

## WHY SUFFER FROM "STANDARD CATALOG UNIT" HEADACHES?

## "SATISFABRICATED" AIR CONDITIONING UNITS BY GOVERNNAIR WILL FIT YOUR JOB!



When ordering packaged air conditioners, why should you inherit the headaches of fitting other manufacturers' unalterable "standard catalog" units to your needs?

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For more details, write the home office or refer to your classified directory for Governair's nearest representative.

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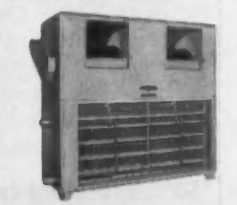
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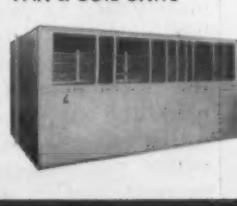
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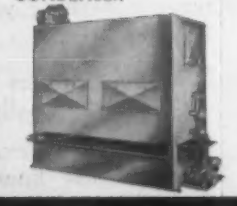
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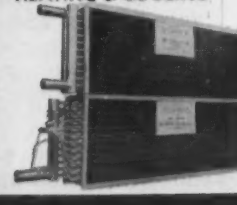
MULTI-ZONE  
FAN & COIL UNITS



EVAPORATIVE  
CONDENSER

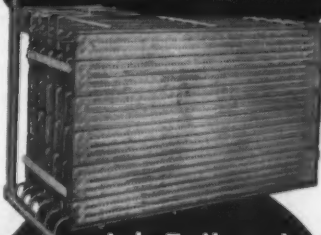


COILS  
HEATING & COOLING



## DEAN GOLD PLATES for Ice Bank Air Conditioning

MANY SHAPES MANY SIZES  
MANY METALS



### Job-Tailored

to your exact size requirements.  
Dean Cold Plates are low in  
first cost and in operating  
costs. Write for catalog.

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Choice territories now available for  
sales representation. Inquiries invited.



### Magnetic Motor Starter Data Published

KEY NO. S-1020

SCHENECTADY, N. Y.—A new 20-page publication containing comprehensive data on General Electric Co.'s NEMA size 0 and 1 magnetic motor starters for such applications as machine tools, pumps, hoists, blowers, saws, fans, mixers, compressors, food processors, canning and packaging machinery, and motor control center has been issued.

Color publication describes all available forms and enclosures. It points out features of nine different field modification kits.

Ordering information for contactor and across-the-line reversing, non-reversing, combination, and multispeed starter forms as well as on modification kits is included. Dimensions are given on open and enclosed forms.

### Covers Ammonia Liquor, Anhydrous Ammonia

KEY NO. S-1021

NEW YORK CITY—A new, 68-page technical data book on anhydrous ammonia and ammonia liquor has been prepared for industry by Nitrogen Div., Allied Chemical & Dye Corp.

The book fully describes anhydrous ammonia and ammonia liquor, listing their chemical and physical properties, specifications, handling and storage features, unloading methods, analytical procedures, and bibliography.

Graphic illustrations include data pertaining to viscosities, density, vapor pressures, boiling and freezing points.

### Catalog Outlines Dial Thermometers

KEY NO. S-1022

RICHMOND HILL, N. Y.—Moeller Instrument Co. is now distributing its new catalog No. 225C on "Bimet" dial thermometers.

These Moeller products are made with 3 and 4½ in. diameter dials and are actuated by a powerful, specially processed bi-metallic helix that responds rapidly to temperature changes.

### Asbestos Fiber Use Described

KEY NO. S-1023

NEW YORK CITY—The use of a newly available type of asbestos fiber to reduce costs of molded plastic parts is described in a brochure, "Amveco Asbestos Fibers for Reinforcement of Plastics," has just been published by World Commerce Corp., S.A.

The booklet deals primarily with the use of Amveco asbestos fiber

in reinforced polyester molding compounds and provides detail on formulations, physical properties, and applications. It discusses how reinforcement with this fiber makes possible the production of parts with excellent physical characteristics at lower costs than parts made with compounds reinforced with other fibers.

### NEMA Publishes New Insulating Standards

KEY NO. S-1024

NEW YORK CITY—New standards for braided flexible electrical tubing and saturated sleeving for insulating wires and leads in transformers, coils, motors, appliances, and all kinds of electrical and electronic apparatus has been issued by the National Electrical Manufacturers Association.

Fives types of insulation, including silicone rubber and vinyl, covering AIEE temperature classes A, B, and H are specified.

Grades A, B, C-1, C-2, and C-3 are identified in a table according to their performance under dielectric stress, potting temperatures, and burning rate.

### Engineering Folder Diagrams Control Use

KEY NO. S-1025

CHICAGO—To help in the selection and application of McDonnell controls for high temperature hot water installations, a new four-page engineering folder has been published by McDonnell & Miller, Inc.

This new folder employs diagrams to show how McDonnell pump controls, water feeders, and relief valves are used in high temperature systems; it also contains brief selection tables.

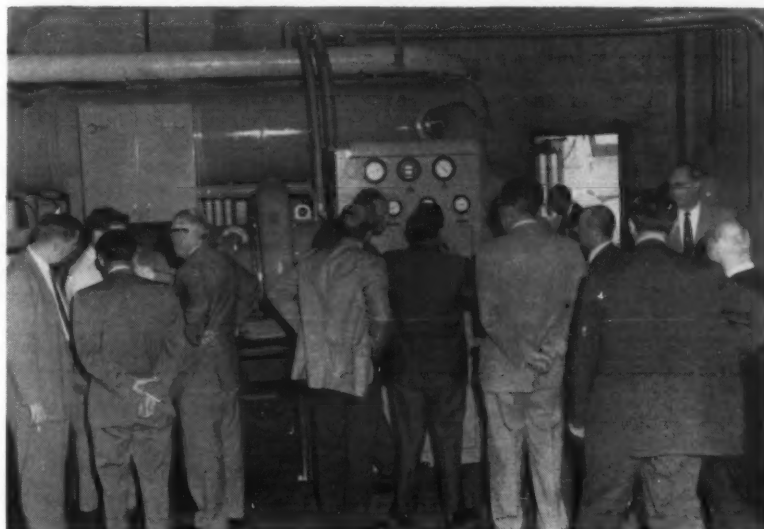
### Brochure Helps Plan School Kitchen

KEY NO. S-1026

HUDSON, N. Y.—Foster Refrigerator Corp. recently announced a new brochure designed to help plan an efficient, economical school kitchen.

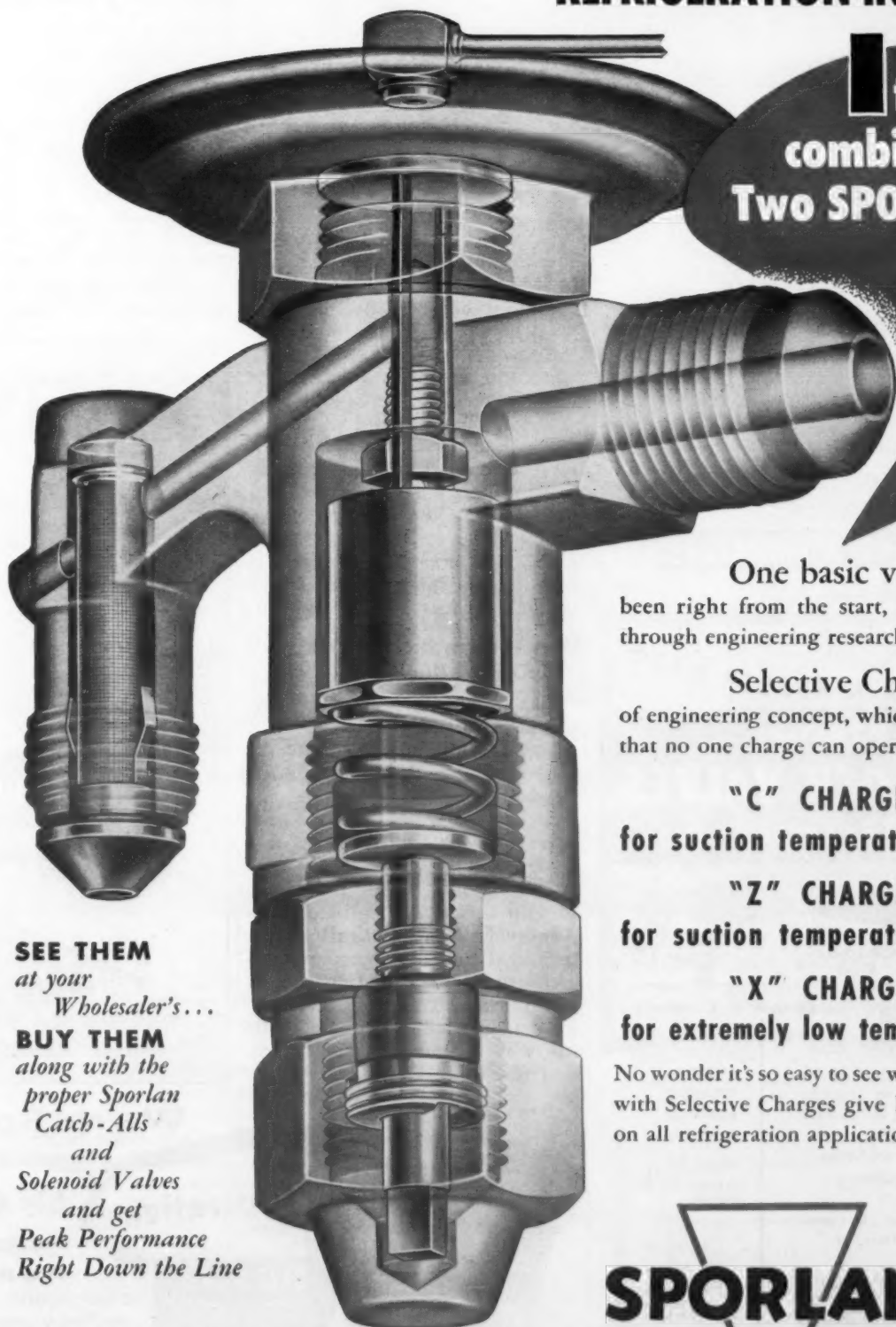
This brochure helps the planning or replanning of school lunch rooms and cafeterias, stressing the importance of careful selection of refrigerators and freezers.

### Group Eyes Large Water Chiller



MEMBERS of a group of 42 engineers representing government agencies and consulting engineering and architectural firms are observing performance of one of the large centrifugal water chillers at Chrysler Airtemp plant in Dayton. The plant has been equipped with the new test section for the units, the largest of which will supply over 600 tons of air conditioning, said to be enough cooling for 325 moderate-size homes.

*It's so Easy to See Why* **SPORLAN G VALVES**  
with **SELECTIVE CHARGES** give **PEAK PERFORMANCE** on **ALL**  
**REFRIGERATION INSTALLATIONS**



**It's the combination of Two SPORLAN Firsts that date back to 1934**

One basic valve design that has been right from the start, plus constant refinement through engineering research.

Selective Charges, then an unheard of engineering concept, which today keep on proving that no one charge can operate on all applications.

**"C" CHARGE**  
for suction temperatures **ABOVE ZERO**

**"Z" CHARGE**  
for suction temperatures **BELOW ZERO**

**"X" CHARGE**  
for extremely low temperatures

No wonder it's so easy to see why SPORLAN G-Valves with Selective Charges give **PEAK PERFORMANCE** on all refrigeration applications... they always have!

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- ◆ Extra-large storage
- ◆ Safety from freeze-up
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- ◆ 20-year life construction

Capacities: 5 to 500 g.p.h.  
Storage: 2 to 240 gals.

Water coolers for all uses  
factory-packaged with your  
condensing unit. Write for  
literature.

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## Small Business Conference Report Section

THE PRESIDENT'S SMALL BUSINESS CONFERENCE, which was held in Washington, D. C. recently, proved to be a source of many suggestions of ways and means for the small company to close the gap between what it can spend for research and what its giant competitors may be spending.

Small businessmen, Government officials, trade paper editors, and educators were chief conferees. On this and the next three pages the NEWS presents some of the data which was presented at the meeting.

## SBA Is Ready To:

1. Provide Financing
2. Aid In Getting Govt. Contracts
3. Help Solve Management and Technical Problems

WASHINGTON, D. C.—"Research today is without doubt the biggest business in America and a competitive segment of competitive business. It is an absolute 'must' for small businesses."

So declared Wendell B. Barnes, chief of the Small Business Administration, in outlining how his agency helps small business to help itself. He spoke at the president's conference on research for small business.

"No business is too small to ignore research and planning," Barnes stressed. "Our pleasant job is to show small businesses how they can put research to work, how to benefit from collective technological developments. Just how imperative this is, is evidenced by estimates that 80% of industry's growth within the next six years will

come from products not now produced."

Barnes pointed out that four years ago, President Eisenhower and Congress created the Small Business Administration as an independent agency for the sole purpose of aiding and strengthening small business.

"It is not the function of government to do the work of business," he said, "but it is our responsibility and desire, within the proper scope of government, to assist small business to help itself."

### SBA 'Backstops' More Than 4 Million Firms

"The Small Business Administration backstops the more than 4 million small firms with a basic three-point program:

"1. Providing credit to worthy small firms which can not otherwise obtain financing on reasonable terms;

"2. Assisting small businesses to obtain government contracts and sub-contracts; and

"3. Helping them solve their management and technical production problems.

"During our short existence, the thousands of inquiries our field offices have received leave no doubt that the greatest need of small business today is improved management knowledge and guidance in the fields of research and technology.

"Our agency program is designed to assist small firms gain access to and properly use information in the development of new and improved products and processes, available from the more than 6,000 private, governmental, and educational research centers.

cifications Directory are also made available through the Government Printing Office.

"One of our fastest growing and increasingly popular programs promotes and co-sponsors with educational institutions, administrative management courses for owners and managers of small firms. To date 264 courses at 100 educational centers have been attended by more than 8,300 proprietors.

"Tentative plans of our agency would set up an agreement with the American Marketing Association whereby small business needing help on marketing problems could be referred to a local, volunteer committee of AMA specialists who would provide individual assistance.

"A similar plan is also now under study with the Society for Advancement of Management whose nearest local chapter would provide individual technical help.

### 'Products List Circular'

"Still another part of our Products Assistance Program is our monthly 'Products List Circular,' listing patented products and processes with marketing possibilities which are available for production or marketing on a purchase or licensing basis. More than 12,000 copies are mailed monthly, covering an average of 100 inventions.

"While the Small Business Administration rarely gives \$744 million.

technical advice on product development, it does seek to bring to the attention of individual small business firms, the information already available in its field and Washington offices.

"Through the products assistance program, our agency, in cooperation with various private organizations, helps small businesses gain access to this research information. In turn, this knowledge assists in product and process development, and in the use of marketing methods and techniques which have been developed.

### Loans Available

"To extend markets or develop and market a new product, it frequently is necessary to seek additional funds or obtain counselling on other financial problems. The business loan program of the Small Business Administration is expressly designed to assist smaller firms.

"Among other things, the agency's business loans help provide the working capital needed in the manufacture of new products, the purchase of the equipment and supplies, the extension of established markets, the development of new markets, and the general expansion of business. Of course, we also extend credit under our disaster loan program when businesses suffer damage because of natural disasters.

"Helping small firms obtain government contracts and sub-contracts is also a major part of this agency's function. Since 1953, through cooperation with other government agencies, there has been set aside for exclusive award to small firms, 12,000 procurements totaling \$744 million.

## A NEW Development from

# AUTO-LITE

## INKLESS TEMPERATURE RECORDER!

The newest advance in temperature recording . . . Auto-Lite model 2200 operates completely without ink. It simplifies temperature recording for most processing operations.

- 2 small mercury batteries in case energize transistor oscillator connected to stylus arm.
- Stylus records temperature on 6" evenly calibrated sensitized chart.
- Battery life approximates 2000 hours.
- Records operating temperatures for 24-hour or 7-day cycles.
- Easily serviced — minimum maintenance.

THE ELECTRIC AUTO-LITE COMPANY  
INDUSTRIAL THERMOMETER DIVISION  
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Electric or mechanical chart drive available for either 24-hr. or 7-day rotation. In wall mounting, portable and self-contained type cases. Remote reading with capillary tubing. Temperature charts in ranges from -40°F to +550°F. Write for further information.

### TEMPERATURE RECORDERS & INDICATORS

## ALMOST AS FLEXIBLE AS A RUBBER BAND

## New ROTALOCK VALVES by Primore

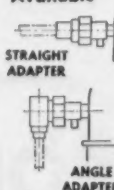


Rotalock is a new type detachable valve which allows the refrigeration manufacturer to provide an easy, economical method of meeting individual customer's valve requirements.

- Detachable
- Rotates a full 360
- Locks in any position
- Available with various type Spuds
- Quick field exchange
- Greater Production Flexibility
- Available in all standard sizes—Flare or Sweat

Shipping caps may be ordered so manufacturer can ship equipment minus the valves, thus customer can purchase valves from Primore direct.

ANGLE and STRAIGHT ADAPTERS Available



**Primore Sales, Inc.**  
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REFRIGERATION  
designing  
sales  
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### Pass Information Along To Small Businesses

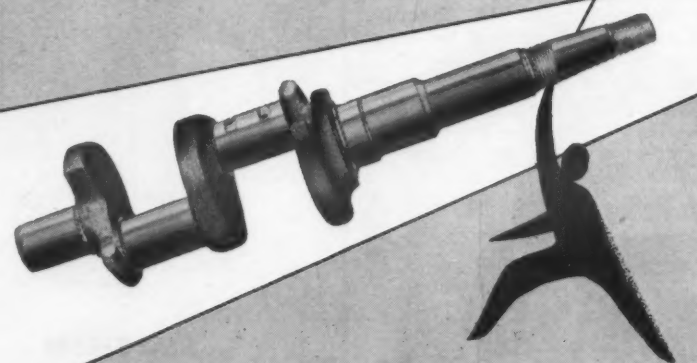
"Available government and private information helpful in planning product marketing is passed along to small businesses. Government procurement specification listings, and private counselling are also available.

"More than 4 million copies of four series of Small Business Administration publications on technical and management subjects have been distributed to small firms. The U. S. Government Purchasing manual, telling who buys what and where, and the U. S. Government Spe-

## SHAFTS by MODERN

Shafts by Modern now power compressors for the leading lines of commercial refrigeration and air conditioning units. For precision SHAFTS, in quantity, consult us. Send blueprints for quotation.

SINCE 1924...



**Modern Machine Works, Inc.**

Pioneers in Shaft Manufacture  
5354 S. KIRKWOOD AVENUE CUDAHY, WISCONSIN

### We're Specialists In

**Refrigeration**

**Air Conditioning**

**Electric Motors, Too!**

**SAVE MONEY.**  
time, effort by ordering from this complete catalog.

WHOLESALE ONLY

### PARTS and SUPPLIES

Over 10,000 items...most complete list in the world...carried in stock! You'll find them all in the NEW Harry Alter Dependabook No. 167 for Fall-Winter, 1957-58. Write on your letterhead for the DEPENDABOOK

**The HARRY ALTER CO., Inc.**  
Chicago 16, Ill. 1717 S. Wabash Ave. New York 13, N. Y. 134 Lafayette St. Dallas 7, Tex. 122 Parkhouse St. Atlanta 10, Ga. 690 Stewart Ave., S.W.  
FREE PARKING AND FAST COUNTER SERVICE AT THESE 4 BIG HOUSES



SBA Executive Cautions

# Set Time To Think, Small Businessman, Plan Ahead to Succeed, Grow Profitable

WASHINGTON, D. C.—“The successful owner of a smaller firm has to set aside time to think ahead—to plan ahead, if his business is to succeed and grow more profitable.”

That point was emphasized by Wilford L. White, chief of the Managerial Assistance Div., Small Business Administration. In an address presented at the President's conference on technical and distribution research for the benefit of small business.

White noted that conferees had heard how the Federal and state governments, professional and trade associations, big business, educational institutions, banks, and trade papers can help the owners of small businesses with their distribution research problems.

## 'Only Owner Can Help Himself'

“But in the last analysis,” White declared, “there is only one fellow who can help this smaller operator. That is the owner himself.”

“All of this research help is a fine thing. Much of it is valuable, although often it goes largely unused. Unused because:

1. Many originators of it do not really understand the problems and operations of a small business. It is much more than a small edition of a large corporation.

2. Many cooperative programs are dominated by the desires of the originator and not the needs of the proposed user—the small operator.

3. The smaller proprietor, in going about his many daily tasks, never learns about it, or learns about it under circumstances which do not provide the time to investigate.

4. The material is organized in a way which is unsuited to the needs of the small fellow or published in words of the professional expert, which are not commonly used by the businessman.”

## 'Keep 3 Things In Mind'

White said that in evaluating distribution research and determining how it can be made more accessible to the small businessman, “we must keep three things clearly in mind:

“1. He spends most of his time working on specific problems which to him develop suddenly and have to be settled just as quickly.

“2. He does not have time—or does not think he has time—to spend many hours working on any particular problem. He feels compelled, therefore, to reach a decision quickly, even though he knows he does not have all the important information available.

“3. He sincerely feels that research is for the large firm, not for him. Research-minded people have made very little effort to explain or ‘sell’ research to the smaller operator.

“These two sets of statements,” White continued, “lead us to our first conclusion: if all of these agencies are going to really help small business through distribution research or in any other manner, they must realize that there are only a limited number of channels through which they can reach him.

“The typical small manufac-

turer or retailer has few or no staff members in his own organization. He is forced, therefore, if he desires any counsel, to surround himself with certain types of professional people and organizations who can help him manage his business.

“Perhaps the most widely used are his lawyer and his accountant. Most small businessmen take their legal and record-keeping problems to these specialists. The accountants, how-

ever, are just beginning to realize the value of their preferred position and are making progress in becoming counselors on many broader problems relating to records and control. There are great possibilities open to them.

“Commercial bankers are in a position to be of great counseling assistance to these smaller firms. Unfortunately, many of them either do not realize that the success of their future is tied up with these small operators as they prosper and grow, or that the typical small business owner welcomes leadership in financial counseling,” White declared.

“The Central Bank & Trust Co. in Denver has developed a nation-wide reputation for helping the owners of many smaller firms over rough financial and management problems, to help them to become larger, more profitable accounts of that bank.

## Trade Press Doing Good Job

“The trade press is doing an increasingly good job of reaching this busy businessman with its short case histories, pithy statements on current problems, graphic illustrations of new industry and trade developments. But they have the problem of getting their ideas off paper into the heads of these men who too often feel that they are too busy to sit down with a new copy, even though it lies right on the desk.

“Not all trade associations have been successful in determining how best they can help the multitude of small operators

in their industry or trade. Sometimes they have concentrated too much on legislative matters, upon the problems of immediate concern to the bigger operators, upon industry-wide problems, to give searching inquiry to the specific problems of their small members.

“However, good progress is being made with the result that more and more smaller operators are not only supporting their trade association, but making avid use of its services tuned to their needs.

“There are thousands of management consultants and management engineering firms in the United States today. Too little is known about most of the smaller ones, many of whom undoubtedly serve well the smaller business firm.

“But the larger, more established management and engineering firms have been trying for a dozen years or more to (Concluded on next page)

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# Survey Shows How Small Firms View Growth Prospects

WASHINGTON, D. C.—J. Wilson Newman, president of Dun & Bradstreet, presented to President Eisenhower's conference on research for small business the following survey. It was conducted by Dun & Bradstreet in 42 cities during the last week of August, 1957. Ten businesses were selected in each area, 420 in all, with a high of \$2,000,000 sales in manufacturing, and a low of \$50,000 in retailing, and median sales of \$500,000 to \$1,000,000.

The ten in each city consisted of three Manufacturers, two Wholesalers, three Retailers, and two Service firms.

## I. In the last few years (say 5 or 10 years) has your business grown, gone backwards, or stood still?

	Mfrs.	Whole-salers	Retailers	Service firms	Total
Has grown	84.5%	80.9%	75.9%	84.1%	80.9%
Has gone backward	4.7	3.4	9.0	5.8	6.0
Has stood still	10.8	15.7	15.1	10.1	13.1

## II. In the coming years will your business grow, go backward, or stand still, in your opinion?

	Mfrs.	Whole-salers	Retailers	Service firms	Total
It will grow	82.9%	83.3%	66.4%	76.5%	76.8%
It will go backwards	3.9	1.2	3.8	1.5	2.9
It will stand still	12.4	13.3	26.0	19.1	17.9
Don't know	0.8	2.2	3.8	2.9	2.4

## III. (a) If anything has held back your growth, what are the factors?

	Mfrs.	Whole-salers	Retailers	Service firms	Total
Nothing in particular	34.6%	25.8%	24.8%	31.3%	29.2%
Competition	10.3	13.5	24.0	14.0	15.7
Lack of capital and financing	12.4	9.0	9.6	14.1	11.1
Lack of capable personnel	6.6	7.9	8.0	9.4	7.7
Taxes	7.4	10.1	4.0	6.2	6.8
Inadequate facilities and equipment	7.4	5.6	8.8	0.0	6.3
Cost squeeze	2.9	9.0	1.6	3.1	3.9

	Mfrs.	Whole-salers	Retailers	Service firms	Total
Tight money	3.7	3.4	2.4	4.7	3.4
All other*	14.7	15.7	16.8	17.2	15.9

\*"All other" includes economic conditions, reduced levels of residential construction, strikes, neighborhood deterioration, reluctance to expand, illness in family, credit practices, and special local conditions.

## (b) If you feel that you are doing better than your competition, what is your strongest asset?

	Mfrs.	Whole-salers	Retailers	Service firms	Total
Nothing in particular	25.9%	21.3%	18.0%	26.1%	22.3%
Service and customer relations	14.7	32.6	22.6	29.0	23.6
Quality of products and service	17.2	13.5	27.1	21.7	20.4
Ability, reputation, and experience	14.7	15.0	14.3	7.3	14.0
Competent personnel	4.3	5.6	5.2	8.7	5.7
Equipment and facilities	7.7	3.4	6.0	4.3	5.7
Flexibility	6.0	1.1	3.0	0.0	2.9
New products	5.2	1.1	0.0	0.0	1.7
All other	4.3	3.4	3.8	2.9	3.7

## IV. Do you know of any particular small or moderate size concern in your line making exceptional progress?

	Mfrs.	Whole-salers	Retailers	Service firms	Total
Yes	15.9%	14.1%	14.8%	13.6%	14.9%
No	84.1	85.9	85.2	86.4	85.1

## V. Do you have any specific plans; that is, a new gimmick, or a new line, or a new way of selling which might increase your sales?

	Mfrs.	Whole-salers	Retailers	Service firms	Total
Nothing in particular	44.9%	52.1%	62.6%	65.1%	55.0%
Will add new lines or products	27.6	16.7	5.7	14.2	16.4
Will advertise more extensively	3.2	6.3	10.6	9.5	7.2
Will open new branches or new accounts	0.0	15.6	1.6	3.2	4.6
Working on new designs and patents	12.6	1.0	0.0	1.6	4.4
Will feature better promotion and service	3.9	4.2	5.7	0.0	3.9
Will remodel	0.0	0.0	6.4	1.6	2.2
Will add new equipment	3.9	2.1	0.0	1.6	1.9
Will grant more credit	0.0	0.0	3.3	0.0	1.0
All other	3.9	2.0	4.1	3.2	3.4

## VI. What is the source of your principal competition?

	Mfrs.	Whole-salers	Retailers	Service firms	Total
Large companies	34.5%	34.3%	44.0%	37.3%	37.6%
Newcomers	14.8	18.6	15.2	19.4	16.5
Similar size concerns	50.7	47.1	40.8	43.3	45.9

## VII. (a) How do you view your opportunities in the future? (b) Do you contemplate remaining in this business? (c) Would you sell out if you could get a price equal to what the business is worth?

(a) The future					
	Mfrs.	Whole-salers	Retailers	Service firms	Total
Bright	34.7%	29.5%	21.5%	38.7%	29.8%
Good	53.8	58.0	50.7	46.8	52.6
So-so	6.9	10.2	17.1	9.7	11.4
Poor	4.6	2.3	10.7	4.8	6.2

(b) Remaining in this business					
	Mfrs.	Whole-salers	Retailers	Service firms	Total
Yes	97.6%	98.8%	96.8%	97.1%	98.0%
No	0.8	1.2	1.6	2.9	1.5
Don't know	1.6	0.0	1.6	0.0	0.5

(c) Would sell					
	Mfrs.	Whole-salers	Retailers	Service firms	Total
Yes	10.9%	11.8%	15.4%	18.5%	13.7%
No	79.8	84.6	79.3	80.0	80.7
Perhaps	5.4	2.4	3.8	1.5	3.7
Don't know	3.9	1.2	1.5	0.0	1.9

## VII. Do you have any special needs in money, materials, people, government legislation to help your growth?

	Mfrs.	Whole-salers	Retailers	Service firms	Total
No special needs	22.0%	25.7%	30.0%	20.8%	25.3%
Money	28.4	23.8	20.6	22.1	23.8
People	18.4	18.8	15.0	22.0	17.9
Tax Reduction	15.6	16.8	20.0	18.2	17.7
Other Legislation*	13.5	14.9	13.8	13.0	13.8
Materials	2.1	0.0	0.6	3.9	1.5

\*"Other Legislation" includes legislation regarding housing, tariffs and imports, price cutting, Fair Trade, doing something about cutting costs, curbing unions, curbing big business, etc.

## SBA Assistance--

(Concluded from preceding page)

find a means of helping the smaller operator without too much success. They see the selfish value of helping the smaller firms because many of them will be the bigger firms tomorrow. They have useful management knowledge which would be invaluable to individual small firms. But the problem has not yet been solved generally of how to get this information and the smaller businessman together at just the right time.

"Reference has been made here today about the increased interest of big business in the welfare of the smaller firms which supply them or distribute their products to the four corners of this country and the world. It is hard to overcome the traditional suspicion between buyer and seller, to recognize that the success of both is tied up in the success of each.

"It may be, however, that in the future, more results of distribution research will move from the large seller to his smaller buyers or from the large buyer to his smaller sellers, than through any of the other channels. The answer will come only when there is mutual respect and when the salesmen and purchasing agents are more conscious of good management practices without losing any of their aggressiveness as salesmen and purchasing representatives.

## Sources of Basic Statistics

"Federal and state governments are also sources of basic statistics used in distribution research as well as completed research projects themselves. . .

"These are the major points of contact which the operator of a small business has when he is suddenly confronted with a management problem and feels that he has to come up with an answer in 24 hours or less. Each of these sources is operated and managed by intelligent people who now pretty much see the need, the opportunity, and the challenge.

"During this period of progress, the owner of a small business cannot stand still either, waiting for someone to help him. He needs to analyze himself and his own job to see to what extent he measures up, and to what extent he falls short."

In these days of a fast-moving world, White asserted, "the successful owner of a smaller firm has to set aside time to think ahead—to plan ahead, if his business is to succeed and grow more profitable. All these outside agencies, and many more, are available to help him. Every day they are in a better position to help him.

## Proprietor Must Know What He Needs

"But the independent proprietor has to want to be helped and before he can want to be helped, he has to know what kind of help he really needs. That means that he has to know what his basic problems are.

"Therefore, he must find the will and a way of spending some time each day or week to develop sound business policies, to plan, to organize, to develop, to control the men, materials, methods, and money he needs and must use to advantage.



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## List of Assisting Services Offered by 'Large Business' to 'Small Business'

(This list was compiled for the "President's Conference on Technical and Distribution Research for the Benefit of Small Business" with the assistance of the National Society of Sales Training Executives.)

### I. "Marketing"

#### Consumer Services

Study local market potentials, population trends, business and employment conditions.  
Study consumer buying intentions, patterns, motives.  
Learn what appeals to various consumer groups.  
Find prospects—refer them to dealer.  
Maintain prospect lists.  
Furnish consumer services, recipes, directions, maps, travel information.  
Pretest advertising and promotion.  
Provide local and national advertising.  
Conduct public contests, sales campaigns.  
Assist consumers to use products more efficiently.  
Handle consumer complaints.

#### Attracting Services

Advice on locations, building, and designs, etc.  
Provide signs—street and interior.  
Cooperate in providing badges, caps, and uniforms.  
Help in store lay-out.  
Furnish window displays and specialists.  
Provide sales aid and "pass-out" material.  
Anticipate seasonal demands.  
Improve product design, more attractive, easier to sell.  
Guarantee products and services.  
Suggest flat-rate charge for repairs.  
Provide nationwide repair services.  
Provide field service "trouble-shooters," part trade-in replacement services.  
Maintain parts for earlier models.  
Tell of new uses for dealers' services and products.

Advertise dealers' second-hand merchandise.  
Cultivate professional recommendations and prescriptions.  
Analyze their retail dealers, advertising.

**Planning Services**  
Suggest marketing quotas.  
Recommend marketing policies and plans.  
Report business sales outlook by products.  
Provide industry sales data.  
Analyze related industries in the territory.  
Help build dealer's community.  
Elicit inquiries for information.  
Study retailers' attitude toward suppliers.  
Investigate resale methods and suggest new ways.  
Establish distributor advisory committee.  
Encourage long range planning.  
Furnish five to 10-year market forecasts.  
Try to level sales curves.

### II. "Money"

#### Record Keeping Services

Suggest accounting systems.  
Supply accounting forms.  
Instruct in accounting methods.  
Keep dealer records and accounts.  
Help them to take cash discounts.  
Set up standards of good performance.  
Show proper ratios of assets and liabilities.  
Furnish auditing service.  
Take inventories, advise what and when to buy.  
Teach management of money.  
Help install time-payment plans.  
Instruct employees to avoid waste.  
Advise on insurance and taxes.  
Analyze financial statements.

**Financial Services**  
Extend credit.  
Consign merchandise.  
Endorse notes.  
Lend money.  
Assist dealer financing—floor plans.  
Finance dealer receivables.  
Suggest accounts receivable financing and investments.  
Advise on credit and collection.  
Provide credit and collection service.  
Find investors.  
Buy stock to be re-purchased.  
Provide consumer financing through dealer.  
Enhance dealers' reputation.  
Organize dealer councils.  
New establishment financing.

### III. "Men"

#### Recruiting Services

Help forecast dealers' manpower needs.  
Furnish job descriptions.  
Attract students to dealers through distributive education.  
Participate in high school and college "Career Days."  
Provide scholarships.  
Conduct school for dealers' sons.

#### Training Services

Suggest sources of employees.  
Screen, train new employees for dealers.  
Provide on-the-job training.  
Supply "Easy Way" cartoon-type manuals, dealer reference manuals, and other technical literature.  
Provide training films, manuals, conferences and courses, for sales and service employees.

Teach installation and repair men.  
Provide factory, home office, and traveling schools, correspondence courses.  
Instruct in safety procedures.

#### Managers' Services

Provide management manuals for owners.  
Publish management information.  
Establish area business libraries, reference library service.  
Assist trade associations to conduct management institutes, provide courses for employees.  
Provide group insurance—life, health, pension plan.  
Cooperate and assist on medical matters.  
Publish comparative wage scales.

### IV. "Methods"

Plan inventory control systems.  
Study wholesaler and retailer warehouse needs.  
Lend safety equipment.  
Provide more warehouses.  
Provide for return of unsalable merchandise.  
Help dispose obsolete stock.  
Simplify sales and service operations.  
Show how delivery, freight costs can be reduced.  
Inspect and maintain equipment.

Make purchases for dealers, pass along savings.  
Provide factory trouble-shooter services.  
Reduce dealers' cost to install and service.  
Make time and motion studies of various dealer tasks.  
Provide company-owned stores to test methods.  
Contribute funds for dealer research.  
Furnish educational materials and equipment to schools.  
Publish and distribute proceedings of educational conferences.  
Furnish note books, identification cards, supplies.  
Provide generally informative films for public showing.  
Publish case history of successful sales methods.  
Prepare train-the-trainer manuals.  
Establish public vocational education courses.  
Offer advance courses in supervision and management.  
Furnish meeting rooms and equipment.  
Support trade association conventions, exhibits, research, education.  
Teach salesmanship and sales management, engineering.  
Assist owners in setting up training schools.

Induce college students to study marketing and business administration.  
Advise what it takes to start and succeed.  
Hold group meetings and seminars so dealers can exchange ideas and methods.  
Furnish complete business franchise.  
Provide industry news from distant places, fashions, imports.  
Provide employment service.  
Keep dealers' morale high—show new techniques and opportunities.  
Furnish legal advice.  
Finding a buyer when dealer wishes to sell out.  
Assist in settling estates.

### V. "Merchandising"

Advise on display lighting and material handling layout.  
Provide store lay-out kits.  
Assist in store openings and planning.  
Teach principles of merchandising.  
Package so merchandise sells itself.  
Provide "everything needed" packages.  
Establish and operate showrooms.  
Establish fair trade prices.  
Share dealers' advertising costs.  
Distribute samples in the retailers' area.  
Provide traveling exhibits.  
Exhibit at fairs, trade shows, and other public gatherings.

## UNIFLOW SWITCHES TO RUBATEX TUBING FOR SWEAT-PROOF INSULATION AT LESS COST

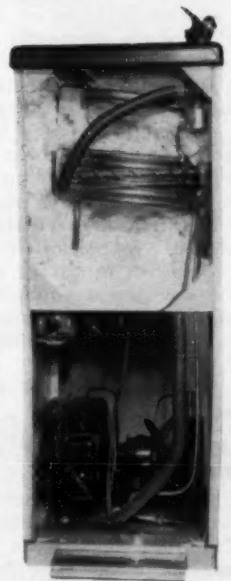
Cold lines in six Uniflow water cooler fountain models and ice cube maker now insulated with this new closed cellular rubber tubing insulation.

"We find Rubatex particularly applicable to our uses mainly because it doesn't absorb water and at the same time provides the insulation necessary at the points where it's used. We also believe Rubatex will last longer. Lower initial cost and fast deliveries were additional influencing factors in our switch to Rubatex."

L. E. Green, Chief Engineer  
Uniflow Manufacturing Company  
Erie, Pa.



Interior of a Uniflow fountain showing Rubatex as insulation on cold water line where it passes close to outside skin of fountain—thus preventing "sweating" of cabinet. Also refrigeration line where Rubatex Tubing prevents condensation and resultant "puddling" on floor.



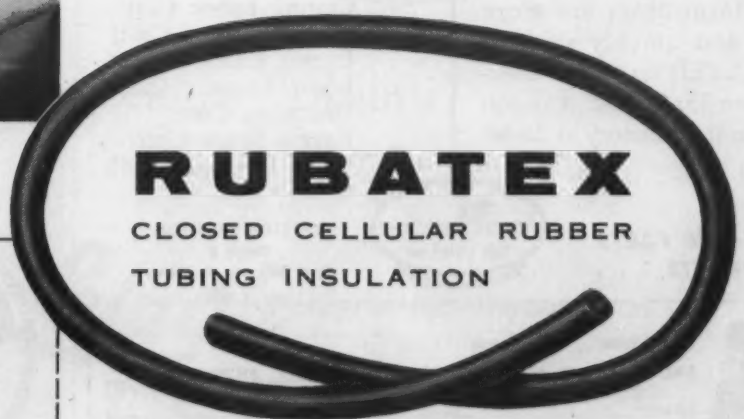
See how easily Rubatex is slipped on the Uniflow cold water line. Rubatex is especially adaptable where carriers are curved. Will readily bend without cutting or fitting—fits snugly to any contour of pipes.



Rubatex Tubing being applied to one of the refrigeration tubes in Uniflow "Kold-Draft" ice cube maker. After inserting Rubatex over tube, an air hose is used to easily speed-up installation.

Rubatex's unique nitrogen-filled closed cellular rubber structure makes it resiliently soft and most adaptable as formed copper tubing insulation for any cold lines requiring sweating resistance . . . cannot absorb water . . . keeps pipes forever dry . . . eliminates any need for additional vapor barrier . . . gives it excellent weather-aging characteristics . . . plus unusually good fire-safe thermal insulation properties. What's more—initial cost of new Rubatex Tubing Insulation is surprisingly low and deliveries can be made fast!

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## Refrigeration Problems

### And Their Solution

(As Written by Paul Reed)

The late Paul Reed, one of the refrigeration industry's most respected writers and teachers, wrote a column on "Refrigeration Problems and Their Solution" which was published regularly in AIR CONDITIONING & REFRIGERATION NEWS for more than 15 years.

Readers throughout the years have hailed this written material as some of the most practical and helpful that has ever been published. Fortunately, the author had an opportunity to revise some of this material and the NEWS is currently re-publishing it.

## Across-the-Line Electrical Diagrams (1)

An electric current flows in a closed circuit. It starts in the generator or battery, flows out on one line through the various lights, radios, motors, and other "loads," and comes back to the generator or battery through the other line.

There are many variations of this; the circuits are interrupted by transformers and vacuum tubes, and they are split into branch circuits, but essentially the circuits must get back to where they started.

However, for most practical purposes outside the power house or generating station, we think of electricity as coming to us on two wires, and all of the electrical appliances that we use are connected between or across these two lines.

Sometimes two or three pairs of wires are bunched together and inter-connected to form "poly-phase" circuits, but they consist of two-wire circuits just the same.

So all of the appliances—motors, electric stoves, toasters, irons, washers, radios, refrigerators and refrigeration equipment small and large, including air conditioning equipment, power equipment, everything that is electrically operated, is connected across two electrical supply lines.

### ALL 'ELECTRICAL LOAD' IS ACROSS-THE-LINE

Each of the appliances, motors, etc., has two wires connected to it; one wire from one side of the appliance, and the other wire from the other side of the appliance. We connect one of these wires to one of the electrical supply lines, and the other wire to the other supply line; thus the appliance is connected across-the-line.

Trace them all out, and all appliances, motors, controls, switches, etc., and all electrical "loads" are

connected across-the-line, either directly or in series with some other "load" or switch.

Take as an example some appliances in the home. Fig. 1 shows a number of electrical appliances and lighting fixtures connected to an electrical supply line. This is a simple circuit, but note how much more simple is the Across-the-Line diagram of these same appliances in Fig. 2, in which the two electrical supply lines are drawn some distance apart, and the appliances and fixtures are shown connected between and across the two supply lines.

### THE ACROSS-THE-LINE DIAGRAM

The type of electrical diagram in Fig. 2 is known as an Across-the-Line diagram. It is used a great deal by electrical men to enable them to simplify the usual schematic or working electrical wiring diagram, that in ordinary form is sometimes difficult to follow.

In a rather complex wiring diagram, it is often difficult to follow a circuit through without getting off on some branch circuit, or getting mentally lost and confused in trying to get back to the other side of the line and the end of the circuit in which we are interested.

By converting a complex or confusing wiring diagram to an Across-the-Line diagram, it is much easier to understand how all equipment is connected to the supply lines and to one another, and the relationship that one appliance may have to another, or to controls or accessories.

It helps greatly in constructing a wiring layout, to first make an Across-the-Line diagram and then from it make the actual schematic or working wiring diagram. It

often prevents incorrect connections and is especially helpful in preventing "feed-backs."

### SCHEMATIC AND ACROSS-THE-LINE DIAGRAMS OF AN ELECTRIC REFRIGERATOR

Fig. 3 shows an ordinary schematic wiring diagram of a typical electric refrigerator equipped with a hermetic type condensing unit, using a split-phase motor with a current-type motor starting relay, a motor overload protector, and a thermostat. Also shown is an interior light and its door switch.

Fig. 4 is an Across-the-Line diagram of this same refrigerator, made from the schematic diagram in Fig. 3. The Across-the-Line diagram very quickly and simply shows that the interior light and door switch are on one circuit, and that the motor and its controls are on another circuit, with both of these circuits being in parallel across the two supply lines.

On the motor circuit, first comes the thermostat. When it opens (when the refrigerator is cold enough) all current is cut off from the motor, motor relay coil, motor relay switch, and overload protector. At this time the motor relay switch is open and there is no current going to the starting coil of the motor.

Before long, the refrigerator warms up, and the thermostat closes. Then the current can get to the motor relay coil and to the running winding of the motor, but since the motor relay switch is still open, current cannot as yet get to the starting winding. At once, the heavy in-rush of current to the running winding is enough to energize the motor relay switch and it causes the motor relay switch to close. Current then flows to the starting winding and the motor then starts.

By the time that the motor gets up to about two thirds or three quarters of its full-load speed, the heavy starting current through the running winding and the motor relay coil, has lessened so much that the motor relay coil is no longer strong enough to hold the motor relay switch closed, so it drops open and disconnects the starting winding from the line.

Current can still flow to the running windings, so the motor continues to run on the running winding until the refrigerator is cold enough to cause the thermostat to open and entirely cut current from the motor circuit, including both windings, relay, etc.

If the overload protector opens, it has the same effect—it opens the entire motor circuit. It is not in just one winding; if it opens, it cuts current from both the running and starting windings.

(To Be Continued)

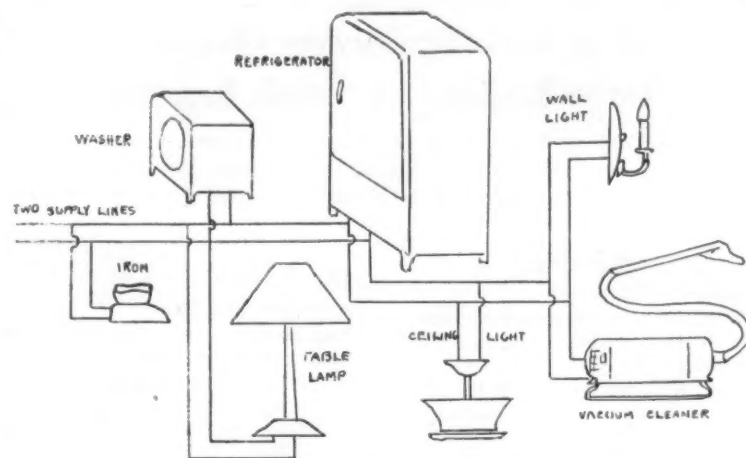


FIG. 1—Several electrical appliances on one electrical circuit.

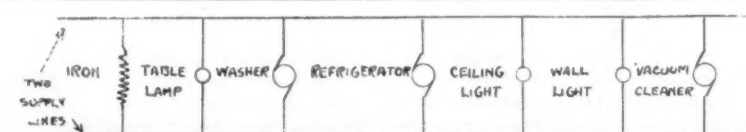


FIG. 2—Across-the-line wiring diagram of same electrical circuit as Fig. 1.

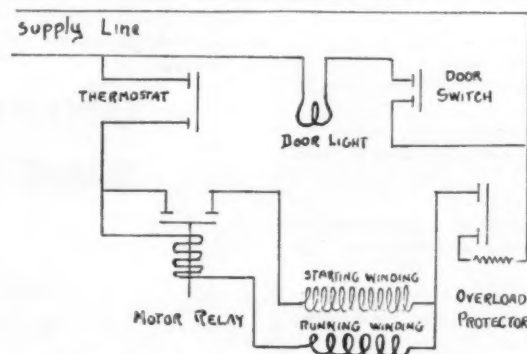


FIG. 3—Schematic diagram of electric refrigerator.

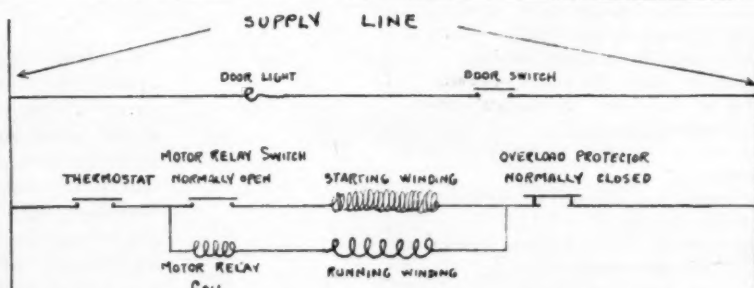


FIG. 4—Across-the-line wiring diagram of schematic diagram in Fig. 3.

## Bakersfield Service Course Opens; Classes Held on Wednesday Nights

BAKERSFIELD, Calif. — Training classes on appliance repair and service sponsored by Bakersfield Radio-TV-Appliance Dealer's Association began recently, President Howard Welty announced.

According to Welty, enrollment in the classes is open to dealers and servicemen in the area, and there is no tuition

cost. The courses are approved by Bakersfield college.

Welty announced the training program lectures will be given each Wednesday, from 7 to 10 p.m., in Room 4 of the Trades and Industrial building.

The Bakersfield dealer group is an affiliate of National Appliance & Radio-TV Dealers Association (NARDA).

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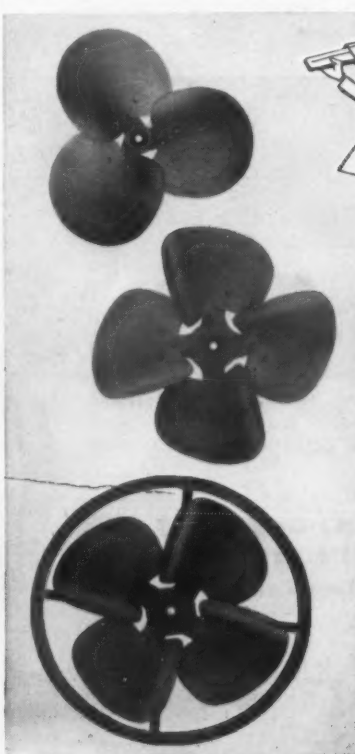


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3525 East Washington Street • Indianapolis 7, Indiana



## Men on the Move . . .

**Ebco Mfg. Co.—ELISHA G. PIERCE** has been appointed to a newly-created position—assistant advertising manager. He was a sales engineer with Boston Filter, Inc., prior to military service.

**Trane Co.—EARL B. EARLE** has been named service engineer at a new service center, Manget-Trane Service Agency at the firm's sales office in New Orleans. Earle has nearly 10 years' experience as service and maintenance engineer.

**THOMAS M. ELLIOTT**, Trane sales engineer in Toledo, has been assigned to the company's new sub-office in Fort Wayne, a subsidiary of his former office.

**Tuthill Pump Co.—PHILLIPS W. BERG** was named regional sales manager in charge of Tuthill's sales organization in Indiana, Michigan, Ohio, western Pennsylvania, and Kentucky.

**Tork Time Controls, Inc.—ROBERT P. MAXSON** has been appointed purchasing agent. Maxson was formerly with Avco Mfg. Co., Emerson Radio & Phonograph Corp., General Electric Co., and U. S. Rubber Co. He has also served as a manufacturers' representative for electrical wiring and switching devices.

**M & C Heating & Plumbing Co. (Zanesville, Ohio)—MARVIN H. RUTHERFORD** has joined the firm as sales engineer for heating and air conditioning equipment. He has been manager of the steel stamping division of the Chicago Standard Transformer Corp. plant in Zanesville.

**National Association of Plumbing Contractors (Washington, D. C.)—JOHN J. HASSETT** has been appointed public relations director. For the last 2½ years, Hassett has been director of public relations, advertising, and distribution for Summit Hall Turf Farm in Gaithersburg, Md. He succeeds **WILLIAM E. HAIGWOOD**, who has entered the public relations consulting field in Washington.

**The Maytag Co.—B. B. TURNER** is head of a newly-created department, utility relations. He will serve as liaison between Maytag and utility companies. Turner was formerly range sales manager for Maytag.

**Flexible Tubing Corp.—RICHARD B. CONNELL** was appointed manager-air conditioning sales. He will have responsibility for sales of the company's "Thermafex," metallic and glass-fiber laminated ducting. Connell joins Flexible from Norma-Hoffman Bearings Corp. where he was field representative for Chicago and northern Illinois.

**Century Engineering Corp.—LEO GRAHAM** joins Century as district sales manager for the area embracing parts of New York, New Jersey, and Pennsylvania. He had been sales manager for an eastern distributing firm.

**PAUL SAFFELL** was named district representative covering Texas, Oklahoma, Arkansas, and part of Kansas. He has had wide experience in sales and promotional work in heating and air conditioning.

**Kold-Hold Pacific (Los Angeles)—JOHN B. CALLAHAN** has been appointed sales manager. He will supervise the sale of Kold-Hold refrigeration equipment in California, Arizona, and Nevada from Kold-Hold Pacific's Los Angeles and Oakland offices. He was formerly with a Los Angeles refrigeration and restaurant equipment company.

**Allis-Chalmers Mfg. Co.—WILLIAM T. HOECK** and **WALTER R. TARBERT, JR.** have been assigned as sales representatives to the Toledo and Detroit district offices, respectively. Both recently completed Allis-Chalmers' training course for graduate engineers.

**A. D. FOOTE** was named assistant director of purchases, succeeding **C. H. NORTON**, who recently retired after 31 years' service in the purchasing division.

**Heating Wholesalers Co., Inc. (Des Moines, Waterloo, and Sioux City, Iowa)—A. W. (ACE) BARBER** was appointed assistant sales manager. Barber, who has been in the heating, refrigeration, and industrial supply business in the midwest since 1937, joined Heating Wholesalers from Ace Supply Co., Des Moines, where he had served as vice president and general manager.

**Thatcher Furnace Co.—THOMAS M. GALLAGHER** has been appointed sales engineer for the firm's eastern Pennsylvania territory, including the Philadelphia and Wilmington, Dela. districts.

**Krauss Air Conditioning, Inc. (St. Petersburg, Fla.)—NORMAN G. TAYLOR** is the new service manager, promoted from assistant service manager.

**Great American Industries, Inc. (Elyria, Ohio)—DONALD A. LEVINE** has been elected a vice president. Levine will continue as general manager of the Rubatex Div., Bedford, Va.

**Philco Distributors, Inc.—JOHN RYAN** has been appointed general manager of the New York Div. to succeed **J. J. HARRIS**, who resigned. Ryan was formerly regional manager for the Atlantic Div.

**Meyer & Depew Co., Inc. (Union, N. J.)—THOMAS W. STREETER, JR.** has joined this Carrier contractor as vice president in charge of engineering. He had been a sales engineer with Diehl Mfg. Co.

**Davis Heating Co., Inc. (Dayton)—JOHN W. MOELLERING** has been appointed vice president and general manager. He has been manager of Gaul Air Conditioner Co.

**Rheem Mfg. Co.—EARL KIRMESER** was appointed director of public relations. He has been in charge of public relations for the Campbell-Mithun advertising agency in Minneapolis.

**R. D. Werner Co., Inc. (New York City)—WILLIAM H. PETERS** has joined the executive sales staff as Products Div. manager. He will direct sales of aluminum ladders and staging. Peters has previously served with Remington Corp., Acme Industries, Inc., and Brown Products Corp.

**American Industrial Chemical Co., Div. of Amerace Corp.—DR. ALBERT H. COOPER** has been named general manager. He directed development of the continuous process now producing silica gel and other silicas at the company's new plant in Butler, N. J.

**Trane Co.—Two new sales engineers** have received field assignments in Trane's Denver and Appleton, Wis. offices. **HENRY R. DEMING** goes to the Denver office, and **ANTHONY R. MAROLD** joins the Appleton office. **RALPH C. SNOW** was transferred from Los Angeles to the firm's new sub-office in San Diego.

**Temco, Inc. (Nashville, Tenn.)—WILLIAM T. BRENT** was appointed sales promotion manager. Brent has represented Temco for the past three years as district manager in the mid-south area.

**Charter Distributors (Atlanta)—LOY S. PAULK** joined this Carrier distributor as merchandising specialist in charge of sales and promotion of room air conditioners and residential central units. Paulk has been in the room air conditioning field for the past 10 years and has done pioneer work in the sale of small home central type air conditioning systems, it was noted.

**Clark Controller Co. (Cleveland)—SIDNEY W. NELSON** has been named a sales representative in the Cincinnati district office. He has been a trainee in the firm's main office.

**Ben-Hur Mfg. Co.—EMIL W. STANTON** has joined this freezer manufacturer as sales manager. Stanton will assist **E. F. JACKSON**, now vice president and general sales manager. Stanton was formerly



(Photo courtesy Smallcomb Electric Co.)

## Helicopter Helps Harry Hoist Half Ton

**HARRY, IS HARRY JAFFE**, owner of the Hotel Monica, and the half-ton is the weight of the exhaust blower unit that had to be on top of his 7-story hotel in time for the re-opening deadline. A crane large enough to do the job was not available, so Jaffe hired the whirlybird which hoisted the equipment from a nearby parking lot to the hotel roof in a matter of minutes. Smallcomb Electric Co. is distributor for the Master fan used in this installation.

merly assistant sales manager of the freezer division of Whirlpool Corp.

**American Blower Div., American-Standard—EDWARD E. HOWARD** has been appointed branch manager of a new sales office in Albuquerque, N. M. For the past four years Howard has been sales engineer in the Denver territory.

**Hi-Mill Mfg. Co. (Milford, Mich.)—RICHARD W. BEARD** was appointed vice president of this producer of fabricated tubular parts. Beard will be in charge of all

operations at the firm's plant in Milford. He has been with the firm for several years.

**Waukesha Motor Co.—A number** of engineering department personnel have been assigned new positions and responsibilities. **J. R. MERRIAM**, formerly assistant chief engineer, was named chief engineer, succeeding **LLOYD BOWER**, who recently retired. **A. W. POPE** will serve as chief research engineer. **E. R. RUTENBER**, formerly chief installation engineer, and **H. M. WILES**, formerly assistant chief

research engineer, were named assistant chief engineers. **J. P. KELLY**, formerly chief draftsman, is the new chief design engineer.

**Main Line Cleveland, Inc.—The** firm has reorganized its RCA Whirlpool Div. into three specialized operations with a separate sales manager for each. **CARL ERTMAN**, who had been sales manager of the entire Whirlpool operation, has been named sales manager of the new refrigeration and range division. **EUGENE V. SHIPLEY** was named sales manager of the laundry division, in addition to his duties as training director. **HAROLD W. THOMPSON** will be sales manager of the new kitchen and builder division. Thompson was previously a salesman in the over-all Whirlpool Div.

**Maytag Rocky Mountain Co.—DON M. HARRIS**, formerly assistant service manager, is new regional manager for western Colorado. Harris will serve franchised Maytag dealers in 29 counties in western Colorado, two counties in Utah, and one in New Mexico.

**Allis-Chalmers Mfg. Co.—R. B. FULTON** was named manager of the new A-C district office in Dayton. **WILLIAM F. VANDERMASS**, formerly manager of the Grand Rapids district, has been appointed manager of the Cincinnati district, and **JAMES A. SUDUTH** becomes manager of the Grand Rapids district. Fulton was formerly manager of the Cincinnati district.

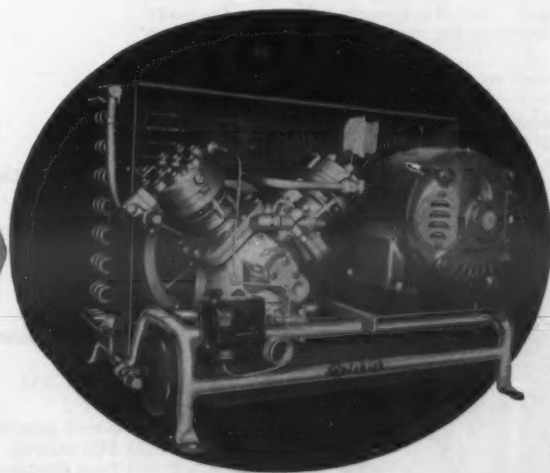
**Thatcher Furnace Co. (Garwood, N. J.)—JOHN C. HENSEL** has been appointed sales engineer for the firm's northeastern New York state territory. Hensel succeeds **TOM GRIFFITH**, who is opening a business in Hudson, N. Y., as a Thatcher franchised dealer.

## LEHIGH BLU-COLD CONDENSING UNITS

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## Servicing Automobile Air Conditioners

(Vol. 2)

BY C. DALE MERICLE

The Mobilette unit is the eighth make to be discussed in the current series on automobile air conditioners. Makes previously described in this series were A.R.A., Artic-Kar, Frigette, Frigikar, Kauffman, Mark IV, and Airtemp. Other makes by "independent" manufacturers will be reviewed in future instalments, following which units of most automobile manufacturers themselves will be described.

Models discussed in the current series are 1956 and/or 1957. For data on earlier models readers are referred to the original series of articles, which is available now in the handy manual, *Servicing Automobile Air Conditioners*.

### MOBILETTE (1)

Mobil-Aire Mfg. Co.  
P.O. Box 122  
Denison, Texas

Standard unit in the 1957 Mobil-Aire line is the "Mobilette" under-dash unit. The company's "WethR-Matic" trunk-type system is available, but only on special order.

The Mobilette system employs a compressor driven off the car engine through a magnetic clutch. Condenser mounts in front of the car radiator, and evaporator case assembly is attached to the dash.

Pushbutton controls, de-icer thermostat, and two fans are featured in the 1957 Mobilette.

Refrigerant charge is approximately 2 lbs. of Refrigerant-12. Exact weight of charge varies slightly with length of lines re-

quired by different makes and models of automobiles.

#### Compressor

The Tecumseh HH compressor is standard on Mobilette systems.

Suction service valve is usually on left side, as viewed from fly-wheel end, and discharge service valve is on right side. Optional locations of the service valves are provided on back of compressor where they occupy the same relative positions.

A Warner magnetic clutch is standard on 1957 Mobilettes.

#### Condenser

Condenser is located in front of the car radiator. It is of single-row design.

A combination receiver-drier is installed on the condenser.

Sight glass is standard on Mobilette systems. It is located

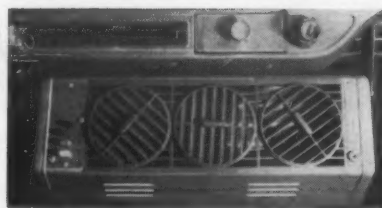


FIG. 1—"Mobilette" 1957 under-dash model features pushbutton controls and two blowers.

in the liquid line, usually at the condenser.

#### Evaporator & Controls

Cooling case assembly of the 1957 Mobilette (Fig. 1), which mounts beneath the dash, houses the evaporator coil, thermostatic expansion valve, de-icer control, two blowers, air outlets, fan and clutch controls, and clutch pilot light.

An A-P 206-C thermostatic expansion valve is employed. Superheat setting of this valve is preset and cannot be adjusted in the field.

Blowers consist of two propeller type fans, each with its own motor. High and low speeds are provided, both blowers being controlled off the same switch.

There are three round air outlet grilles on the front of the cooling case. These can be rotated to direct discharge air as desired.

Clutch and blower controls are mounted on the front of the cooling case at the left end. In the lower right corner of the front of the case is a pilot light called the "Mobil-Eye" which lights whenever the magnetic clutch engages the compressor.

Pushbutton controls are employed in the 1957 Mobilette unit. There are four pushbuttons. Pushing the top button turns the unit off (fans and clutch). Second button operates the blowers at high speed; third button operates them at low speed. The blowers can be operated independent of the clutch to provide air circulation in mild weather if desired.

Pushing the bottom button engages the magnetic clutch.

A Spencer Thermostat control is wired into the clutch circuit to prevent de-icing. It is located on the suction line in the case. This control is a thermostat that breaks the circuit to the magnetic clutch when the temperature of the suction line drops to a predetermined point. Setting of the de-icer thermostat cannot be adjusted in the field.

(To Be Continued)

#### For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning & Refrigeration News, 450 W. Fort, Detroit 26, Mich. Only 25¢ each.

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"Recalibrator" screw right out in the open... on back of case for quick and easy access.

Bourdon tube permanently leak tight... you can't see this, but you'll find it out in use. An internal stop protects against excessive pressures.

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## ASRE Issues 10th Edition of Data Book

NEW YORK CITY—The 10th Edition of the Design Volume of the Air Conditioning-Refrigeration Data Book, official reference work of the American Society of Refrigerating Engineers, has been published.

Sponsored by 44 experts in the industry, the 10th Edition was written by eight associate editors, each selected for particular eminence in his field. This volume, 85% revised, includes information on physical data, application design, basic equipment, auxiliary and self-contained units, operation, codes, standards, abbreviations, symbols, definitions, theory, engineering, and refrigerants.

Each of the 39 chapters has been written specifically with design considerations in mind. The 800-page text is augmented by more than 400 charts and

diagrams, plus 117 pages of charts and tables, to provide the fundamental facts upon which the companion Applications Volume is based.

Included for the first time are: English-to-Metric Conversion tables, a list of foreign and domestic air conditioning and refrigeration associations, the new ASRE industry-approved Refrigeration Numbering System, and cross-reference listing of United States and foreign trade names for refrigerants linked with corresponding ASRE designations.

This limited edition is available by writing to the Data Book Sales Manager, American Society of Refrigerating Engineers, 234 Fifth Ave., New York 1, N. Y. Postage-paid price: \$10 in the U.S.A. and \$10.50 in foreign countries.

How to balance air conditioning, heating and ventilating systems with the **NEW**

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Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.  
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario



## RSES Convention Program--

(Concluded from Page 1, Col. 4)

Three of these Information Please sessions are planned to start off the days' meetings on Sunday, Monday, and Tuesday. The Sunday session will run for two hours and feature a special "surprise attraction." Others will allow grilling of the panel of experts for only one hour.

Eight talks on subjects of particular interest to servicemen given by authorities in their fields fill the educational program.

Milton O. Larson, president of the Chicago chapter of RSES, will call the convention to order at 1 p.m., Saturday, Nov. 16. Opening session will be devoted to greetings and officers' and committee reports.

### STABILITY OF REFRIGERANTS TALK

At 4 p.m. Dr. Donoval E. Kvalnes, manager of the Technical "Freon" Products Div., Organic Chemicals Dept., E. I. du Pont de Nemours & Co. will present latest laboratory data on "The Stability of 'Freon-12' and 'Freon-22' Refrigerants."

After the Information Please session Sunday morning, Bryant L. Britt, manager of the electrical service department of Wagner Electric Corp., will discuss "The Repair and Rewinding of Motor Stators for Hermetic Sealed Units."

At 1 p.m., H. G. Saunders, assistant to the sales manager of Kinney Pump Div., New York Air Brake Co., will talk on "Application and Servicing of High Vacuum Pumps in the Air Conditioning and Refrigeration Industry."

W. H. Longerbaker, director of store engineering for the Independent Grocers Alliance (IGA), will then get frank about "What a Supermarket Operator Expects of a Service Con-

tractor."

Harry Barclay, assistant manager, Industrial Div., Bell & Gossett Co., will explain "Piping Design and Service of Centrifugal Water Circulating Pumps."

Closing the session, A. E. Manning, vice president of Kelmore Corp., and second vice president of International RSES, will describe his "Labor Saving Tools and Instruments."

After the Information Please session on Monday, the society will conduct its final business session, including election of new officers. That evening, starting at 7:30 p.m., it will stage its annual banquet and entertainment in the Morrison's Terrace Casino. Herman M. Goldberg of the Chicago chapter will act as master of ceremonies.

### HOME HEAT PUMPS TO BE DISCUSSED

At the final educational session Tuesday morning, R. P. Cook, head of the engineering department of Typhoon Heat Pump Co., Div. of Hupp Corp., will describe his company's experiences with "Heat Pumps for Residences."

F. Honerkamp, chief of engineering design and development for Anemostat Corp. of America, will discuss "Air Distribution Problems and What a Service Engineer Can Do to Help Overcome Them."

At noon, the Manufacturers Service Managers Club will gather in the Clark room for its annual meeting.

On Friday, before the convention begins, the board of directors will meet in the Hollywood room at 9 a.m.

Persons planning to attend the convention can register in advance for \$1. Banquet tickets are available at \$7.50 per person.

## RACCA Meeting Plans--

(Concluded from Page 1, Col. 3)

are scheduled for Monday and Tuesday. Sunday activities will be confined to a board of directors meeting at 9 a.m. and a reception and cocktail party starting at 5:30 p.m. Non-members and guests can purchase tickets at the registration desk outside the French Room.

W. L. Long, general convention chairman and president of the Chicago RACCA, will moderate the Monday morning panel. Panel members drawn from the local chapter will discuss the fallacies of price cutting, development of sales engineers, compensation of salesmen, selling for profit, and the secret of good management.

### UA SPEAKER

Peter T. Schoemann, general president of the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry, will speak on labor management relations at the luncheon.

Tuesday morning, Harvey O. Miller, RACCA first vice president, will moderate a panel forum on management subjects. National members will offer some observations on leasing of equipment, maintenance contracts, profit sharing plans, and a survey of national averages to start things rolling.

At luncheon, "Chuck" Hanna of Chicago will give a humorous talk on "A Fate Worse than Debt."

Immediately following the luncheon meetings, the Chicago RACCA will provide free transportation by bus to the Exposition at the International Amphitheatre. The bus will make a round trip every hour until the exposition closes in the evening.

William D. Moody, RACCA president, will deliver his annual message to the association Monday morning. New president and directors will be elected at the Monday luncheon meeting.

New board of directors will meet at 3 p.m. that afternoon to elect officers and appoint committee chairmen.

### AWARDS PRESENTATION

Also on the program for the Tuesday luncheon are the presentation of awards by Armand Cowan, second vice president, and a word to outgoing directors and officers by Arthur M. Palen, past president.

Ray Kromer, executive vice president, commented that awards are usually presented at RACCA's annual banquet. Because of conflicting events during the exposition, however, RACCA will forego its annual banquet and substitute the luncheon.

## 5 Plead Guilty In Detroit--

(Concluded from Page 1, Col. 4)

tunity to square themselves with the city's department of buildings and safety engineering.

Two of these have since paid their \$25 court costs and the case against a third has been dropped.

The 19 firms and individuals represents one of the largest groups ever taken to court at one time by the department for refrigeration license violations.

The pile-up resulted from new sources of violation information made available to the department and because of the vacation of the assistant city attorney assigned to prosecute license violations. It represented no "drive" against contractors by the department.

### CAN SUBMIT JOB INSTALLATION LIST

Sam Schugar, assistant to the chief safety engineer, said those whose cases were adjourned would be given an opportunity to submit to the department a list of all jobs they have installed.

All jobs installed without a permit would have to be legalized by arranging for a licensed refrigeration contractor to take out a permit for the job and accept responsibility for it.

If this were done, the department would take no further action. But if the contractor failed to report any jobs installed without permits, he would be brought to court again.

### CLARIFICATION

Schugar said that a new bulletin was distributed to the contractors to clarify again what the department means by "installing" refrigeration equipment.

Schugar emphasized that this was not a new policy, but one that the department has been following all along. It was issued again because of the large number of contractors now getting into the air conditioning field who may not be familiar with it.

### WHAT 'INSTALL' MEANS

"The word 'install,'" the bulletin said, "includes the running of refrigerant-containing piping or tubing; the joining of refrigerant-containing components; and the initial starting and putting into operation of the refrigeration equipment."

"It is not intended to apply to the mere setting of equipment in place where none of the above mentioned work is involved. . . .

"Persons not licensed or registered as refrigeration contractors in the city of Detroit

may not install or service refrigeration equipment, but may contract to install and service refrigeration equipment provided that a clause is made part of the installation contract designating the licensed refrigeration contractor and stating that the latter will obtain the required installation permit, install the equipment, and perform subsequent servicing of the equipment under the terms of the contract."

"In other words," Frank Drogosch, chief safety engineer, declared, "we are not trying to keep anyone from selling refrigeration equipment. We are only interested in seeing that it is installed safely."

### 'DISAPPOINTED IN LACK OF INTEREST'

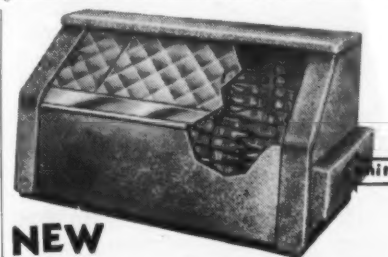
Drogosch said that he is disappointed in the lack of interest shown by heating contractors in getting refrigeration contractors licenses now that they can do so without meeting the experience requirements of the code.

At the last two monthly

meetings of the gas and oil board of examiners, not one heating contractor has asked for clearance to take the refrigeration examination, he noted.

He conjectured that some might be holding off because they figured they would have to get a 1957 license if they took the examination now.

That is not so, Drogosch said. After passing the examination, the contractor has 12 months in which to pick up his license.



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## DESICCANTS AND DRIERS

## Part 4—Requirements of a Desiccant—I

By Frank J. Versagi

The mechanism by which physical type and chemical type desiccants take up water has been discussed. It was pointed out that the best desiccants in the world are not necessarily good for use in refrigeration.

Some of the other requirements a refrigerant desiccant should possess will now be considered, followed by a survey of the materials available in refrigeration driers today.

## ABSORB OR ADSORB?

Before continuing, the frequent confusion between absorption, spelled with a b, and adsorption, spelled with a d, should be cleared up.

A substance is absorbed (b) into another when the second materials. But the material is substance, making it a part of itself. Our blood, for example, absorbs all the various foods we eat, making them an actual part of the body. In refrigeration, chemical type desiccants, like calcium sulfate (Drierite), absorb water making it a part of themselves.

Physical type desiccants, like activated alumina and silica gel, take up water by adsorption (d). In adsorption a substance adheres or sticks to the surface of the material, but does not actually become part of it. The basic idea is loosely illustrated by the attraction of a magnet for iron filings. The iron filings are on the surface of the magnet, but are not actually part of it.

In refrigeration, the moisture adheres to the millions of tiny surfaces exposed by the micro-

scopic pores present in physical type desiccants.

Practically speaking, then, chemical type desiccants absorb; physical type desiccants adsorb.

If desiccants could perform their drying function without being in the actual refrigerant stream, water capacity and water capacity alone would be used to judge their worth. However, as we suggested in our first article, a good refrigerant desiccant must have other properties.

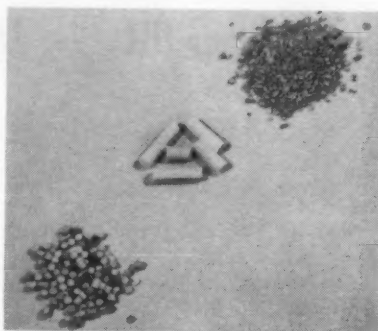
One of the most important considerations is that of dusting. Almost all desiccants, in their natural form, tend to dust or break down into tiny particles when they take up water. Some will dust from just the mechanical attrition caused by refrigerant flow and temperature variations.

## ABRASION PROBLEM

Since most desiccants are mineral like in composition, dusting creates not only the problem of possible clogging, but also the threat of possible abrasion and wear on finely finished surfaces.

To overcome the dusting problem, desiccants are treated or coated with other chemicals which tend to reduce their breakdown.

Generally speaking, desiccants should be chemically inert; they should not react with water or with any other substances present in a refrigeration unit. (This requirement, of course, does not apply to the specific pick up of water by such desic-



CALCIUM SULFATE—supplied in sticks, pellets and granular form. The granular particles are treated with a blue moisture indicator.

cants as calcium sulfate.)

In recent years a solid and a liquid which remove water by chemical action with resulting by-products have been introduced. They will be discussed later.

The important point is that the desiccant should not break down the refrigerant, or oil, or alcohol, or any other substance with which it would be continuously in contact.

A desiccant should not add anything to the system. This restriction applies not only to the possibility of adding potentially corrosive or destructive chemicals, but also to adding substances which might be compatible with the refrigerant but nevertheless change its physical properties and therefore its refrigeration efficiency.

The question of acid removal is a controversial one. Some of the desiccants will, others won't. It is best that any removal of acid be done by a physical type desiccant, by adsorption.

The reason for this is that in any chemical removal of acid, other substances are added to the system, one of these being water which will form more acid and start the cycle all over again. Since acid cannot form without the presence of moisture, it would seem that acid removal should be a secondary consideration to moisture removal.

The filtering capacity of desiccants is a factor which must be considered, and this point will be discussed more fully in our study of assembled driers.

Related to filtering capacity is the problem of pressure drop. Whether the desiccant is granular, in round balls, or briquetted into a solid core has a bearing on this which will also be discussed later.

And, of course, price is to be considered in selecting a refrigerant desiccant. One of the newer desiccants has proved to be five to seven times as effective as the present popular materials. But the material is so expensive that driers filled

## Government Contracts

## SYNOPSIS OF PROPOSED PROCUREMENT

## ARMY

Baritan Arsenal, Metuchen, N. J.  
COMPOUND, COOLING System Conditioning & Anti-Seepage, 1 oz. Pellet—1,250,000 ea.—IFB 58-71B—Bid Opening 28 Oct. 57. An additional quantity of 550,000 ea. is being reserved for Small Business under a partial joint determination.

## NAVY

Navy Purchasing Office, Fourth and Independence Ave., S. W., Washington, D. C. Attn.: SPF-1A.  
CONDENSING UNIT ASSEMBLY 3.8 ton for 440 V. 3 Phase 60 cycle a.c. Air Conditioner per Spec. MIL-R-16743 C of 7 Sept. 1955, and Amendment No. 2 of 31 Oct. 1956 with Modifications as indicated in the Invitation. Note: The Material called for under this specification is on the Navy Qualified Produce List—4 ea.—IFB 600-331-58-S—Bid Opening 29 Oct. 57.

## AIR FORCE

Directorate of Procurement, Holloman Air Force Base, N. Mex.  
BOILER—200 hp. Natural Gas fired 1,050 B.t.u. per cu. ft. 15 lbs. working pressure, 3 phase, 220V, 60 cycle complete with steam controls and burner equipment, A.S.M.E. approved safety valves—3 ea.—IFB 29-600-58-17B—Bid Opening 31 Oct. 57.

District Property & Supply Officer, Gulf Coast District, Maritime Administration, P.O. Box 674, New Orleans, La.  
FURNISH AND INSTALL CENTRAL AIR CONDITIONING SYSTEM, Mobile Reserve Fleet, Bay Minette, Ala.—Job—IFB B3-MA58-10—Bid Opening 10-25-57.

## GENERAL SERVICES ADMINISTRATION

General Services Administration, Business Service Center, Region 6, 2306 East Bannister Rd., Kansas City 10, Mo.  
ICE MAKING MACHINE FLAKE 1 ton with 3 hp. compressor, 220 V. a.c.—1 ea.—IFB KC-58570—Bid Opening 10-17-57.

with it would be too costly. into the working parts of the system?

Using very small driers with this material would reduce the filtering effectiveness of the drier cartridge, so it is being used in combination with standard desiccants.

Now for a look at some of the popular desiccants. First, the chemical type.

**CALCIUM SULFATE (DRIERITE):** The manner in which this desiccant chemically removes water from a unit has been discussed. An efficient desiccant, it is supplied in granular form, in sticks, and as a cored or briquetted block. Normally tending to dust, it is treated to reduce dusting to a safe level.

Calcium sulfate will not as readily give off moisture at higher liquid line temperatures as will some of the physical type desiccants. It may be used with sulfur dioxide as well as with the popular "Freon" type refrigerants.

**CALCIUM CARBIDE:** This is a controversial desiccant which has found some acceptance in the industry. Calcium carbide, of course, is the substance used in the old head lamps of automobiles to generate acetylene. This is the reaction.

Calcium Carbide plus Water  
 $\text{CaC}_2 + 2\text{H}_2\text{O}$   
gives Acetylene plus Lime  
 $= \text{C}_2\text{H}_2 + \text{Ca(OH)}_2$

While this chemical reaction will remove water from a refrigeration unit to very low levels, two questions arose. First, would the acetylene, a combustible, explosive gas, pose a danger? Second, what would happen to a unit if the lime, formed during water removal, traveled

The drier manufacturer cited reputable tests to prove that the explosion or fire hazard due to acetylene is non-existent in practical refrigeration. The second question is being resolved by taking precautions to retain mechanically the lime formed and preventing it from leaving the drier.

Whether or not the acetylene formed during a few months or years operation is enough to cause excessive head pressures is a question which, to date, has received contradictory answers.

There is one popular liquid type chemical desiccant which destroys the actual identity of the water just as do the solid types. In addition it contains a compound which is essentially an anti-freeze agent, rather than a desiccant.

Many servicemen have reported good trouble shooting service from such compounds—when a system was really wet. It is reported that several unit manufacturers at different times used such materials to replace the liquid travels with the refrigerant and any chemical actions which take place will take place throughout the entire unit rather than in a restricted area, there is reluctance to use liquid desiccants generally.

There are other chemical desiccants—calcium chloride, calcium oxide, barium oxide, phosphorus pentoxide, barium perchlorate. But none of these is regularly supplied by the major drier manufacturers as a standard product.

(To Be Continued)

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AIR CONDITIONING sales and service engineer. 11 years' experience in sales, application, technical training and service on residential and automobile air conditioners at manufacturer and distributor level. Desires position with manufacturer. Age 33. Willing to relocate in Midwest or Western area. BOX A5896, Air Conditioning & Refrigeration News.

CANADIAN SERVICE engineer, twelve years' experience domestic and commercial. Certificate member R.S.E.S. Desiring to serve firm in northern states, with possible advancement in future. Would relocate early next year and will be available for interview enroute or at Chicago Convention. BOX A5897, Air Conditioning & Refrigeration News.

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SERVICE ENGINEER: Acme Industries, Inc. is expanding their service organization and needs an alert, enthusiastic, sales-minded service engineer who has proven experience and knowledge in commercial and industrial air conditioning and refrigeration equipment. This position at the home office is an outstanding opportunity for the right person. Write, giving full details of your background and experience to Jack J. Bacsik, Service Manager, ACME INDUSTRIES, INC., Jackson, Michigan.

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WANTED—MANUFACTURER'S agents to contact distributors and dealers for established air conditioning organization. Some valuable territories open with many prospects. Agents contacting commercial and restaurant trade will find this franchise of unusual interest. Reply to BOX A5883, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION representative for Ohio, Indiana, West Virginia. Must be experienced in field work, or have successful background selling commercial refrigeration. Draw, expenses. Firm well known in territory. Send complete details about experience, firms represented, present activities and reference. All held in strict confidence. BOX A5891, Air Conditioning & Refrigeration News.

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PERFECT OPPORTUNITY to combine with refrigeration business. Alabama, South Carolina, Georgia, North Carolina, Tennessee, and Mississippi distributors wanted to sell drive-in stores for national burger-shake chain. \$6,000. required. Write FREEZE-ETTE CORPORATION, 3121 Maple Drive, Atlanta, Georgia.

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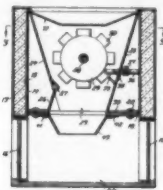
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# PATENTS

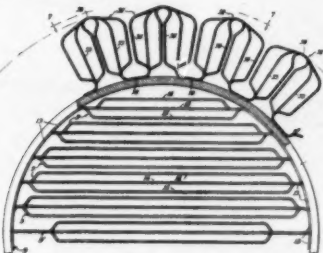
Week of August 20  
(Continued)

**2,803,410. ICE CRUSHING DEVICE CAPABLE OF PRODUCING TWO SIZES OF CRUSHED ICE, DEPENDENT UPON THE DIRECTION OF ROTATION.** George F. Bodoni, Jr., Philadelphia, Pa., assignor to 4 Bros. Refrigeration Mfg. Co., Inc.



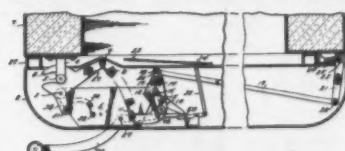
2. An ice crushing device comprising, a boxlike housing having an open top, a hopper residing in said open top and having an opening therein, a platform mounted within said housing beneath said hopper in spaced relationship therewith, said platform having an aperture in vertical alignment with the opening of said hopper, a rectangular funnel mounted on said platform in direct alignment with said hopper opening and platform aperture, said funnel having opposed parallel sides and opposed converging sides, a cylinder rotatably mounted within said funnel between said opposed parallel sides, a plurality of knives on the surface of said cylinder in staggered relationship to one another, said knives each having a sharp edge and a blunt edge, a toothed member within said funnel on one of said converging sides, said toothed member being so positioned relative to said cylinder as to enable the knives to pass through the interstices thereof, an ice deflecting member on the opposite converging side of said funnel and lying below said cylinder, the lower portion of one of said converging sides being flared outwardly in a direction away from its direction of convergence, and means for causing the rotation of said cylinder in two directions.

**2,803,440. PINNED TUBE CONSTRUCTION.** Clyde S. Simpelaar, Racine, Wis., assignor to Modine Mfg. Co., Racine, Wis.



1. In a high efficiency heat exchange structure, the combination of a cylindrical hollow tube, a plurality of elongated fin members lying in respective planes which are parallel to a diametrically extending plane, each fin member extending transversely across the tube and being provided with longitudinally extending flange members, a diametrically extending fin member having its longitudinal edges substantially continuously secured to the internal surfaces of the tube in heat transfer relation therewith, the flanged fin members being stacked one upon the other at opposite sides of and with the flanges of all fin members extending toward said diametric fin member, with the flanges of the adjacent members at opposite sides of said diametric fin member being seated on the latter, said flanges being secured to the tube side walls in heat transfer relation therewith, the fin members at opposite sides of said diametrically extending fin member successively diminishing in width outwardly therefrom, a plurality of strip fins formed from each of said fin members.

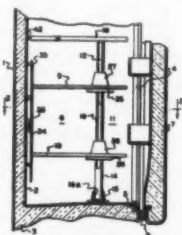
**2,803,480. REFRIGERATOR DOOR LATCH.** Edwin E. Foster, Austin, Tex.



1. A closure mechanism particularly for refrigerator doors and the like, comprising a frame to be secured to the inside surface of a refrigerator door, a latch member pivotally mounted at one end in the frame and composed of a cam and a long arm arranged radially from the pivot, a setting member pivotally mounted at the other end of the frame and being composed of two arms with one arm forming the pivot point for the member, a flexing spring pivotally connected at one end to the long arm of the latch member and the other end of the spring pivotally connected to the other arm of the setting member, said spring exerting a constant force between its two pivot points, a door handle pivotally mounted in the frame and operatively connected

to actuate the setting member, and means connected adjacent to a hinge axis of the door and to the setting member to control the movement of the spring during the closing of the door.

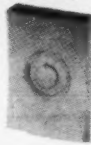
**2,803,513. ROTATABLE SHELF STRUCTURE FOR REFRIGERATORS.** Peter E. Davey, Erie, Pa., assignor to General Electric Co., a corporation of New York.



1. In a refrigerator having a food storage compartment, a rotatable shelf structure removably mounted in said compartment and comprising a threaded shaft formed of a plurality of separate sections, one of each pair of adjacent sections having an axial recess in the end thereof and the other of each pair having a pin protruding axially therefrom, with said pin being removably accommodated in said recess thereby to detachably and rotatably secure together said pair of adjacent sections, whereby all of said sections are detachably and rotatably secured together, means releasably mounting said shaft in a vertically upright position in said food storage compartment, a plurality of collar members each rotatably mounted on a separate one of said shaft sections, separate releasable locking means engaging each of said collar members with the shaft section thereof for releasably restraining rotation of said collar members relative to said shaft section, said locking means disengaging when said collar is rotated and a plurality of rotatable shelves each associated with a separate one of said shaft sections thereby to be individually removable therewith from said storage compartment upon the detaching of said shaft sections one from another, said shelves being separately supported on said shaft sections by said collar members threaded thereon and being adjustable along said sections by the rotation of said collar members.

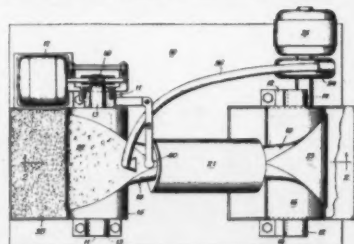
## DESIGNS

**180,831. SPACE CONDITION RESPONSIVE INSTRUMENT.** Robert Haven Hove, Mount Airy, N. C., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.



Week of August 27

**2,803,950. ICE MAKING MACHINES.** John R. Bayston, Van Nuys, Calif.



1. In a machine for continuously producing chipped ice, a freezing evaporator comprising a generally cylindrical sleeve having refrigerant therearound in heat transfer relation therewith; together with a conveyor of size corresponding to the interior diameter of the aforementioned evaporator sleeve and extending therethrough in surface contact therewith; together with power means driving said conveyor to move ice and water progressively through the freezing evaporator at a predetermined regular rate, with means for injecting water into the portion of said sleeve within the evaporator whereby ice is formed therein, and a rotatable power driven device directly engaging the aforementioned conveyor and located beyond the discharge end of the evaporator for dislodging chips of ice from the surfaces of the conveyor.

**2,803,952. REFRIGERATED STORAGE TANK.** Eugene M. Setsekorn, Elmhurst, Ill., William G. Espersen, Chicago, Ill., and John Ammerman, Western Springs, Ill., assignors to U. S. Industries, Inc., Chicago, Ill.

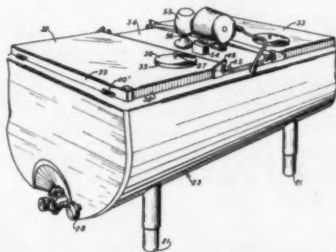
4. In a refrigerated storage tank for use with perishable liquids comprising a pair of inner and outer shells having curvilinear bottom and side walls and open at the top and formed of rigid material spaced one from the other all around with heat insulating material in between, evaporator plates having an inlet at one end into which liquid refrigerant is introduced and an outlet in another end from which the evaporated gaseous refrigerant is

**Editor's Note:** Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

Printed copies of patents, reissued patents, and patent designs may be secured from the Patent Office; patents and reissues are 25¢ each, while designs are furnished at 10¢ each. Copies should be ordered by number and title and a mention of the fact if they are either Designs or Reissues.

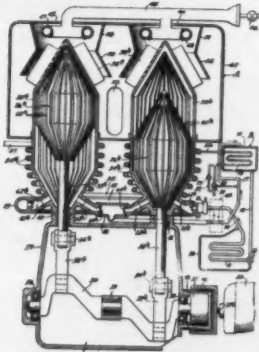
Address orders to: Commissioner of Patents, Washington 25, D. C.

returned to a liquefaction system, and cover plates shiftable between raised position for access through the open end at the top into the interior of the inner shell and closed position for sealing off the open end of the shell.



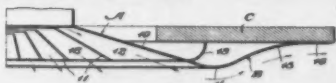
means for circulating liquid refrigerant to the evaporator plates for purposes of refrigeration and means for agitation of the liquid material within the inner shell for maintaining uniform temperature distribution, a top wall covering a part of the open end of the inner casing, a driving motor mounted outside the casing over the top wall portion thereof, an agitator located within the casing, an agitator shaft extending downwardly through an opening in the top wall into communication with the agitator for operation thereof.

**2,803,951. REFRIGERATING COMPRESSOR.** Alvin B. Newton, Wichita, Kans., assignor to The Coleman Co., Inc., Wichita, Kans.



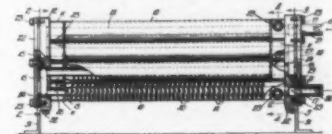
1. In apparatus of the character described for effectuating expansion and contraction of a fluid by heat transfer thereto, a cylinder heated at one end portion and cooled at the other end portion and provided with an inlet and an outlet, and a freely fitted piston reciprocable within said chamber for displacing fluid from one end to the other end thereof, said cylinder being provided with internal fins and said piston with external fins to expedite heat transfer with fluids passing thereover.

**2,804,007. ANTI-SMUGGING ELEMENT FOR AIR OUTLET DEVICE.** Franz J. Kurth, Mamaroneck, N. Y., assignor to Anemostat Corp. of America, New York, N. Y.



1. In combination with an air outlet device mounted with its front or air discharge end in advance of the exposed surface of a ceiling or wall and operable to effect lateral discharge of air over said surface, said air outlet device having at its front end an outwardly extending finishing flange, an air guiding element of material width separate from said air outlet device extending outwardly from said flange over a relatively wide portion of said surface and having its front or exposed face cooperating with the front or exposed face of said flange to provide a surface a major portion of which is curved generally continuously and gradually rearwardly and outwardly toward said surface and terminates in a flat portion disposed adjacent and substantially parallel to said surface.

**2,804,283. COUNTERFLOW CONDENSER.** Stanley J. Ruszkowski and Frank E. Pietruszynski, Chicago, Ill.



1. A condenser of the type described comprising a single bank of aligned tubes, a header block secured at each end of said tubes, said tubes having flat surfaces at the ends, the flat surfaces of adjacent tubes at alternate ends being in contactual relation with aligned openings therethrough providing a passage through the tubes for fluid to be cooled to flow in a sinuous path, tubular fixtures secured to said tubes at the ends of said sinuous path and providing inlet and outlet openings in said tubes concentric pipes within said tubes having their ends partially extending into said header blocks and communicating with spaced recesses therein opening upon the outer face of said header blocks, closures covering the outer faces of said header blocks, said pipes and recesses providing a passage for the cooling fluid to flow in a sinuous path in the same direction as the sinuous flow of the fluid to be cooled, means providing inlet and outlet openings in said pipes at the ends of said second sinuous path, baffle means interposed between each inner pipe and associated outer tube and causing the fluid to be cooled to flow around the pipe a plurality of times as such fluid moves from one end of said tube to the other end of said tube.

**2,804,286. RADIATION FINNS.** Ralph Pintarelli, Johnston, R. I.



In a heating system, a radiation fin of rectangular configuration having an aperture therein for the reception of a horizontally extending, heat carrying conduit, said aperture being located on the longitudinal center line of said fin but offset with respect to the transverse center line thereof whereby the major portion of the fin is adapted to be disposed above the conduit, a plurality of dished, elongated projections extending radially from said aperture and in communication therewith, said projections being disposed in circumferentially spaced relation and each successive one thereof extending in an alternate direction, and a plurality of additional dished, elongated projections formed in said major portion of the fin, some of said additional projections extending from one side of said fin, and others extending from the other side thereof, said additional projections each having an opening at its upper extremity.

**2,804,287. PINNED TUBE HEAT EXCHANGER.** Andre Huet, Paris, France.

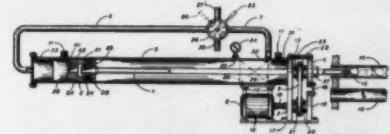
1. In a heat exchanger having a passage through which heating gases flow over a plurality of fluid circulating tubes disposed transversely of the gas

stream in parallel rows located in planes perpendicular to the direction of gas flow with the tubes in any row uniformly spaced and those of adjacent rows being staggered with respect to



each other; a pair of heat transfer fins mounted on each tube to extend longitudinally thereof and projecting from the surfaces of the tubes in substantially a diametrical plane paralleling the general direction of gas flow and having lateral faces curved from their distal ends to their junction with the tube surface at points where the lateral fin surfaces become substantially tangential to the tube surface with the distal ends of fins on tubes in alternate rows aligned with each other so as to divide said passage into a number of sinuous lanes between the tubes and form substantially continuous smooth boundaries therefor, the intermediate rows of tubes being closer to the row of tubes on the upstream side thereof with respect to the direction of gas flow than to the row on the downstream side thereof as to juxtapose more of the surfaces of the tubes and fins of intermediate rows in confronting relation to the surfaces of tubes and fins in the upstream row and thereby narrow the gas lanes in these regions.

**2,803,842. HEAT EXCHANGER TUBE CLEANER.** Joseph C. Fuller, Redondo Beach, Calif., assignor, by mesne assignments, to California Research Corp., San Francisco, Calif.



In a tube cleaning device having a cylinder, a coaxial shaft sealed therein, a piston slidably supported in said cylinder, said shaft having an inner end rotatably connected to said piston, the outer end of said shaft projecting out of said cylinder and provided with a tube cleaning means, and means for rotating said shaft; the combination comprising means for connecting the ends of said cylinder alternately to a source of pressure fluid and to the atmosphere to extend and to retract said shaft and said cleaning means, and pressure responsive means communicating with a port in said cylinder adjacent its outer end and adapted to be alternately connected to said pressure fluid source and to atmosphere by the traverse of said piston across said port, said pressure responsive means.

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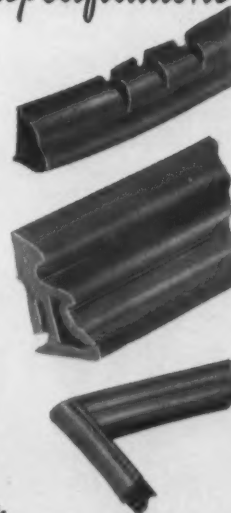
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## Prediction --

(Concluded from Page 1, Col. 3)  
\$200 million for 1957, \$200 million for 1958.

Residential systems, \$300 million for 1957, \$370 million for 1958.

Applied systems, \$1,190,000,000 for 1957, \$1.2 billion for 1958.

Heating equipment adaptable to air conditioning, \$550 million for 1957, \$600 million for 1958.

All other, \$600 million for 1957, \$625 million for 1958.

Industry total, \$3,226,000,000 for 1957, nearly \$3.4 billion for 1958. Predicted increase for 1958 of about \$133 million.

Wampler declared that the general public in the U. S. has not learned what an air conditioner is supposed to do.

The industry has a tremendous job in this regard, he said at a press conference here on occasion of opening of the new La Puente plant for Day & Night Mfg. Co., and The Payne Co., divisions of Carrier Corp.

Wampler noted that profit margins in the industry "are very decidedly lower and I see no letup next year. The competitive situation is more intense than any time since the war."

## Open New Carrier Divs. Plant In Calif.

LOS ANGELES — Official opening of new offices, facilities building, and manufacturing plant at La Puente, Calif. for Day & Night Mfg. Co. and The Payne Co., both divisions of Carrier Corp., was celebrated here recently.

La Puente is a newly incorporated city 18 miles east of Los Angeles via San Bernardino freeway and truck highways.

The two divisions moved from Monrovia, Calif. to the new factory building which measures 1,160 ft. long by 420 ft. wide. Manufacturing, shipping, servicing, and selling operations are all being conducted from the new location.

In addition to increased productive capacity, the new plant boasts such advantages as:

Provision to manufacture refrigeration parts of air conditioning equipment and additional heating components.

Self-contained manufacturing facilities for air conditioning and refrigeration evaporator and condenser coils.

Ability to handle steel in coils instead of sheets.

Improved paint processing facilities.

New self-contained enameling plant for "Super Jetglas."

Two miles of overhead conveyors and other automation.

The 68-acre site lies between two major rail lines—Southern Pacific and Union Pacific—and has a spur serving the full length of the factory building.

Day & Night and Payne are headed by William J. Bailey, who is also a vice president of Carrier Corp. Bailey's assistant in charge of production and assistant general manager is Ray Tritten.

Address of the new facility is 855 S. Anaheim-Puente road. Mailing address is Box 2222, La Puente, Calif. Telephone numbers are Edgewood 3-1211 and Cumberland 3-6611.

## Arkla, AGA Map '58 Gas Cooling Drive--

(Concluded from Page 1, Col. 5)  
tion's gas companies for the joint program.

A key agreement reached at the meeting, held at Dallas in September, "offered the prospect of a 20% reduction in prices of residential air conditioning units provided gas utilities accept responsibility for a minimum quota of air conditioner sales," according to AGA.

### ASSIGNED QUOTA

"To achieve this goal, each member of the AGA committee has been assigned a personal quota, for which he is to obtain assurances from gas utilities in his area.

"In addition, a series of regional symposiums will be held across the country early in 1958. At these meetings, committee members and manufacturer rep-

resentatives will acquaint gas utility managements with the reasons and requirements for entering and becoming a factor in the air conditioning market. The symposiums will cover both residential and commercial-industrial air conditioning, and will include special sessions on sales and operation."

Other action by the committee included measures to promote acceptance and use of gas air conditioning equipment. One such step was endorsement of an AGA proposal to appoint a sales promotion representative in Washington, D. C. to represent the gas industry with government.

Plans for national advertising and promotion of air conditioning by AGA were reviewed. Case histories of successful gas company air conditioning adver-

tising and promotion campaigns were to be placed at the disposal of Arkla and any other interested gas air conditioning manufacturers.

According to the AGA report, Hamilton outlined the policies which Arkla will follow:

Arkla was to take over immediately operation of the former Servel plant at Evansville, Ind. Sales headquarters at Little Rock, Ark. will market the air conditioning units under the trade-mark "Arkla-Servel."

### RESEARCH PROGRAM

A vigorous research program will be coordinated with the AGA research program and that of the Southwest Research Institute.

Arkla plans to raise the heating capacity of the 5-ton direct fired unit from its present 96,000 B.t.u. to 144,000 B.t.u. for use in the northern U. S.

A considerable expansion of

the former Servel air conditioning sales staff is planned. These people will work closely with gas utilities.

Arkla will do its own national advertising and promotion.

Arkla is considering the possibility of developing an add-on gas air conditioner in addition to the units now available.

A service organization, including a school, will be set up by Arkla.

### TO DEMONSTRATE EXPERIMENTAL UNITS

In a report on progress of the AGA air conditioning research program, Allen Schrodtt, director of AGA's PAR Program, said that AGA would reach its goal for this year by having at least three operating experimental units of new air conditioning systems ready for demonstration to manufacturers by the end of 1957.

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